

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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TERMS—SPECIAL NOTICE.—The terms of the *English Edition* of the *Agriculturist* will remain at \$1 a year for subscriptions received during October. The future terms will depend upon the Currency, expenses, etc.—The *GERMAN Edition* is now \$2 a year; or: Four Copies for \$7; Six Copies for \$10; Ten or more Copies for \$1.50 each. Single numbers 20 cents, post-paid.—The *German Edition* will contain all the prominent Articles and Engravings of the *English Edition*, besides a separate department specially adapted to German-Americans. Our readers will confer a favor both upon the Publisher and their German neighbors, by making this *Edition* more widely known among them.—See other business items on page 304.



Notes and Suggestions for the Month.

October in America is the golden month of the year. Poets sung of "golden corn" long before the golden eared Maize gave the words the force which they now convey to those familiar with this most golden of yellow harvests. The progress of agricultural science and good practice are fast depriving our landscapes of the charm of topped corn fields upon which the eye used to rest with such satisfaction, seeing the rich treasures of the grain showing out from among the weathered husks, as if Nature repented herself of having covered up so much wealth. So we must content ourselves with knowing that the stately but awkward stooks represent all the value and more too, and thriftier farming besides. Compensation is Nature's law;—and the stooking of the corn brings to view the still more golden show of pumpkins, which outside of New England are a crop too much neglected. Orchard fruits, golden and red, in variegated pyramids under the trees, or drifted around the cider mills, repeat the hues of the frost touched forest. Abundant game tempts hunter and sportsman, and this perhaps placed the Archer as the October zodiacal Sign. The Indian of the great plains and rocky mountains is the *Sagittarius* of our Western World.

Work for the Farm, Barn, and Stock Yard.

Agricultural Exhibitions, etc., no matter if too much given up to horse trots and jockeys, should be attended by farmers, for there is always some good to be gained and new facts to be learned; and at any rate, there is a chance to exert a good influence to redeem the societies from evil ways into which so many have fallen.

Barns and Buildings.—Look over hints for previous months in making ready for winter. This is a very favorable season for all general repairs that do not require the getting out of heavy frames, etc., which is properly winter work; at all events prepare good protection for all live stock. Pine boards are not so expensive an outside protection, as an inside lining of provender.

Beeves.—Soft corn, pumpkins, and grass at this season, fatten cattle faster than corn, roots and oil cake in winter. The bulk of flesh should be laid on now, preparatory to the later finishing off.

Butter.—Secure as full a flow of milk as possible, by feeding roots or pumpkins as the pastures fail, and add oil-cake, bran, soft-corn or the like to produce a maximum yield of butter.

Cabbages.—See note under Kitchen Garden.

Cellars.—Keep constantly open for good ventilation, look to the draining, if there is any chance for water to get in by springs in the bottom, or through any part of the foundation.

Carrots.—Dig before there is danger of the ground freezing even very slightly. Keep in the cellar and away from frost. The tops before they are frosted are good feed for cattle.

Cattle.—As the nights grow long and cold, give shelter to all kinds of stock. The manure alone will pay for taking them up at night.

Cisterns and everything laid in cement should be finished in time to harden before freezing weather. Make sure of a sufficiently thick covering of earth over underground cisterns, etc.

Corn.—Push forward the husking. Place the garnered corn in the ear in good airy cribs, so that it shall dry rapidly. Bind up the stalks in firm bundles and make good stooks, left open for circulation of air, yet strong and shaped to shed rain. Well cured corn fodder is worth as much as good ordinary hay. See note in last month's *Agriculturist* about saving seed corn.

Draining.—The lessons of the drouth should make every farmer in favor of thoroughly draining (4 feet deep, drains 2 rods apart,) all land subject to suffer either from drouth or excess of moisture. Try this experiment on both kinds of land—not in a sand bank or a gravel bed.

Farmers' Clubs.—See Basket item for a model constitution—and if possible organize and keep up an active club in your own neighborhood.

Grain and Granaries.—Leave no grain in stacks after this month. Clean thoroughly and store in vermin proof granaries, or market at

once. We hold to selling whatever we have to dispose of whenever we can get a fair price. In the long run this averages the most profitable results, as it saves anxiety, wastes, losses by vermin, and trouble in various ways.

Hogs.—Feed with perfect regularity. Soft corn may be fed on the ear, and so with sound corn before it hardens, though when it is convenient it is always best to cook hog feed. Hogs fatten faster in October than in any other month.

Ice-Houses.—See page 290, and Basket item.

Manures.—Preparations should be made this month for a supply of litter, muck, etc., which used first as bedding or as absorbents, shall constitute the chief bulk of the manure heap. The manure pits, cellars, and yards, should be cleared out, and that which can not be used on the land this autumn, piled up in well laid heaps. Strawy manure being mixed with the fine, or the fresh composted with muck or sods. This makes room for the winter manure, which should be augmented by every means possible.

Painting.—The present is a most favorable time for painting buildings, implements, etc., especially such tools as are used in early spring.

Plowing.—See article on page 293, present No.

Potatoes.—See page 298, also article in Basket.

Poultry.—Provide warm, light, winter quarters—if possible where the sun will shine in. Arrange for saving all droppings and sweepings.

Pumpkins furnish an excellent, nutritious food for a comparatively short time. Cook the immature ones for the hogs. Feed ripe pumpkins to milch cows, only after removing the seeds. Bear in mind that the effect of eating the seeds is to diminish the secretion of milk, while that of the kidneys is increased. The soundest pumpkins may be kept into the winter.

Roots.—In harvesting, cut and bruise as little as possible. Top them so as to be able to feed the tops to cattle. Let them have a few days to "sweat" before housing. Gather in this order: carrots, beets, mangels, soft turnips, rutabagas.

Rye may be sown with advantage any time before the middle of the month—better earlier.

Sheep.—Keep salt always before them; let there be no lack of feed, that they may be in condition to meet a severe winter. Keep the bucks from the sheep, unless you are so situated as to be able to raise very early market lambs.

Sorghum.—Top, harvest, and work up any not cut last month. Save the leaves for fodder and also the second growth if any has started.

Timber cut at this season, better just before the leaves fall, is durable and less apt to decay.

Wheat.—It is late to sow wheat north of lat. 40°. Still it may be done on good ground not given to heaving by the frost. That which has too rampant a growth may be fed off by young cattle, but not too close. It promotes tillering.

Orchard and Nursery.

The gathering of fruit has so much poetry about it that it can hardly be called labor. The trees are loaded with their ruby and golden treasures, the ripe consummation of the season's growth. The fruit has worked into its very texture all the glorious sunsets of the past summer and is waiting to be plucked. But our Chief has put a veto on all fine writing; here, like Gadgrind, he is for facts, and though a tempting subject, we must leave the sentiment thereof to the enjoyment of the reader, while we go on with our very matter of fact Calendar.—In picking fruit, whether for keeping or for market, too much care can not be observed. A bruised fruit will soon rot, hence the necessity for hand-picking all that can be reached by any kind of ladder, and the use of some kind of a fruit gatherer for those which can not be secured in this way. A home-made fruit picker was figured in the Sept. *Agriculturist*, and others have been given in former numbers. Fruit, after being gathered, exudes its superfluous moisture and undergoes what is called sweating. It may be put in heaps under the trees, be spread on the barn floor, or be placed in barrels, not headed up, till sweating is completed. Pick in dry weather, leaving the later sorts until frosts come. Fruit, to keep well, must be kept as cool as possible without freezing. After sweating is over, barrel up, and leave the barrels under a shed until quite cool weather, and then remove to a cool and well ventilated cellar. In barreling, use no packing material, but have the barrel so full that it will be necessary to press down the head by means of a lever or screw press contrived for the purpose. See illustration in "Basket." Select the fruit for marketing, have the barrels of the same quality all through, and correctly mark the name of each sort. Winter pears may be treated the same as apples.

Now is the proper season for planting all kinds of hardy deciduous trees and shrubs, except stone fruits. The old axioms have to be repeated. Plant trees; don't buy of peddlers, but of reliable nurserymen; and prepare the soil well. If the site for an orchard is damp, it must be drained. Manure, plow and subsoil. Some one has remarked that he would "in setting out an orchard, however large, make but one hole, and that would be over the whole orchard"—meaning thereby that the whole soil should be well prepared. Nurserymen should give equal care in setting them. The hole should be abundantly large to receive the roots; prune all mangled roots with a smooth cut from below outward and shorten in the top from one third to one half. Set carefully, putting the best soil around the roots and work it well in among them, letting the tree be on a very slight mound so as to allow for settling to the general level. Carefully label everything, and besides make a record or map so that the name may be ascertained should the label be lost. Planting may commence as soon as the leaves begin to fall freely. It is sometimes necessary to remove good sized trees, in which case great care must be taken to get up all the roots possible, and it is well to set the tree in the same position with reference to the points of the compass, as it stood before.

The nurseryman will now appreciate the benefit of ample preparation for the fall trade, in having labels, stakes, and all the materials for facilitating packing at hand. In taking up and heeling-in trees to supply orders, use the greatest care to keep the sorts distinct. If there is none of a particular variety in stock, never supply its place with another kind. Fair and conscientious dealing will build up a business, while the reverse will ruin one.

Cider.—In some places cider will be made the last of the month, though it is generally left until later. Use sound apples and leave the pulp 24 hours before pressing. Put the juice into clean and sweet barrels and set in a cool cellar to ferment.

Drying Fruits.—Apples, etc., may often be profitably dried for home use or for marketing. Shallow trays, with slat bottoms made of lath, answer a very good purpose. These may be set upon two rails supported at a distance from the ground and

are very readily moved at night, or in case of rain.

Insects.—Crush out the borer. As leaves fall, cocoons and clusters of eggs may be readily seen.

Labels.—Examine to see if they are sufficiently distinct, and renew all those which will not last another year. Keep also a record by which the tree can be identified should the label be lost.

Manure.—This is the secret of good crops of fruit as of other things. Spread a liberal coat over the surface as far out every way as the roots extend.

Ornamental and Shade Trees.—These are planted at the same time and with the same care as fruit trees. Autumn planting of evergreens is not commended.

Seeds.—Collect tree and shrub seeds of all kinds and plant or keep in boxes of sand until spring.

Kitchen Garden.

The growing season is over, except for some later things, and the October sun is ripening up the melons, squashes, tomatoes, etc., and giving the final growth to those crops which are to be wintered or withstand the early frosts. There is an abundance of work to be done in the garden. The ripening products are to be harvested, the tender things are to be put into cold frames, the half hardy crops of spinach, etc., are to be covered with straw, salt hay, or other litter; and more than all, the ground is to be prepared for next year's crops. In stiff soils especially, we can not too strongly recommend the practice of throwing the earth up into ridges, either by the spade or plow, according to the size of the garden. Earth thus weathered becomes, as an old gardener once said to us, "as soft as silk." We recently passed by a garden cultivated probably by some squatter in one of the newest blocks of N. Y. There were beds of spinach, lettuce, leek, etc., and not a weed to be seen. Certainly one who owns his land can afford to keep it in as good a condition as that of a mere squatter. Even at this season let the garden be free of weeds.

Artichokes.—Give a winter protection of straw or litter, and bank with earth in all northern localities.

Asparagus.—If plants are at hand, make a new bed. Work in a plenty of manure, at least two spadefuls deep, and set the plants 3 inches below the surface, at least a foot apart each way. On growing plots, cut the tops and dry and burn them. Give a liberal coat of coarse stable manure all over the bed.

Beans.—Last month's *Agriculturist* gave directions for drying Limas. Don't forget to do it. Pick and salt string beans—they make good pickles.

Beets.—Pull at approach of frosts; do not cut tops too close; dry a little in the sun, place in the cellar and cover with sand or earth to keep from wilting.

Cabbages.—Plants sown this autumn may be transplanted to cold frames. The late heading kinds may be left out until hard frosts. Preserve through the winter by replanting in a dry place and cover with straw and a board roof; or place two rails over a furrow and set the cabbages head down, throw on some straw and turn a furrow toward them; or cover the heads with earth by means of a spade. They winter well by being planted in a cool cellar, not under the dwelling rooms.

Cauliflowers.—These will winter well in the cellar, and those which have not formed heads will do so, if the seed was of good stocks. Young plants, put three in a quart pot, are kept in a pit until spring.

Carrots.—Harvest same as beets; feed the tops.

Celery.—Continue to earth up until hard frosts. When necessary to give winter protection, take up and stack in a bed about two feet wide, bank up with earth, and protect with soil and board roof.

Hot-Beds.—Provide rich soil for early spring, under a shed, or where it will be in condition to use.

Lettuce.—Sow seed in frames; transplant to them.

Onions.—Those late sown require winter covering. Some sow this month and cover the patch with litter; they start very early in the spring.

Parsnips.—Dig a supply for winter use, and keep covered with sand or earth, leaving the main crop to be dug from whenever the ground is open.

Pickles.—Continue to lay down in salt, cucumbers, imperfect cauliflowers, green tomatoes, etc.

Rhubarb.—Make new beds, setting the crowns 3

feet apart. Cover old plants with plenty of manure.

Salsify.—Treat the same as directed for parsnips.

Spinach.—The late sown must be thinned to 6 inches, and hoed and weeded until hard frost, then cover lightly with straw or litter until early spring.

Squashes.—Gather and house as soon as ripe, as they are injured by a slight frost. If sudden frost is indicated, gather in heaps and cover with vines.

Sweet Potatoes.—Prevent the vines from rooting, by moving them occasionally. Dig as soon as frost kills the tops. Dig on a warm day and after they are dry pack in cut straw, handling very carefully.

Tomatoes.—A slight covering put over the partly ripened fruit will keep off early frosts, and often help secure a larger crop than without this care. Can or bottle a full supply, and make catsup.

Trenching can well be prosecuted this month.

Winter Cherries.—Gather as they ripen and preserve, or keep in the bulbs, for winter eating.

Fruit Garden.

When there is sufficient room there are many reasons why a separate spot should be devoted to small fruits. The ground is to be deeply worked and manured, and all hardy varieties may be planted as soon as the leaves fall.

Blackberries.—Enrich the ground with muck or leaf mold, and well decomposed manure, and set at least 6 feet apart each way, or in rows 8 feet apart, and 4 feet in the row. It is well to lay down the canes and protect them with a light covering.

Currants and Gooseberries.—Transplant. See note on varieties on page 267 (Sept.). Take cuttings of strong wood of the present year's growth, six inches to a foot long, cut out all but two or three of the upper buds, and set them in good soil with these buds just above the surface. Set 6 inches apart and crowd the soil firmly around the base of the cuttings, cover with litter when cold weather comes on. They will make good plants next spring.

Dwarf Fruits.—These are the only kind of fruit trees for which there is usually room in the garden. Dwarf pears and apples may be planted in autumn. Cherries and peaches are better left until spring.

Grapes.—Pick as they ripen. Those intended to be kept should be fully ripened and packed in small boxes deep enough to contain two layers, and be kept in a cool place. Plant new vines. Very far north, pruning and laying down may be done this month. See wine making on page 294, and look over our notes on varieties given from time to time.

Strawberries.—Note directions for planting in Aug. and Sept. *Agriculturist*. Procure a supply of covering material ready for use when cold weather comes on. Leaves and straw are most suitable. New beds may be made nearly to closing of ground by frost. It is desirable to have the plants get established in the soil before winter, ready to start into growth at the opening of spring. In this locality we have had very good fruiting beds the next spring from large, vigorous plants, set as late as Oct. 15, but this is not always to be looked for.

Flower Garden and Lawn.

This is a most favorable month for making improvements, laying out new walks, preparing lawns, setting trees, and all work of construction. Chrysanthemums, Dahlias, and late blooming plants should still make the garden attractive, and neatness of keeping be continued. Place tender plants in-doors before cool nights check their growth.

Bedding Plants.—It seldom pays to take up old plants of Verbenas, Petunias, etc. New ones to winter over should have been provided for by cuttings. It is not too late even to start them now.

Bulbs.—Nothing is more attractive in spring than a show of Hyacinths, Crocuses, Tulips, etc. This is the time to plant them. Set in rather sandy ground well manured, putting the large ones three and the small ones two inches deep. Before the ground freezes, cover with coarse manure.

Chrysanthemums.—Leave some to make the borders gay until hard frosts; pot others to bloom in-doors. They will wilt a little at first, but soon

recover if shaded, and will flower for some months.

Dahlias.—See that all are correctly labeled, while the flowers will allow them to be identified. After frosts kill the tops, allow the roots to remain a week or so in the ground to ripen. Take up on a dry day; keep in a dry cellar the same as potatoes.

Frames and Pits, should be made ready. See page 287. Set the plants in them when night frosts come, and cover; keep sash off every warm day.

Fuchsias.—Pot on the approach of frost, and keep over winter in a cool, dry cellar.

Gladiolus.—Take up before the ground freezes, and preserve in the cellar the same as dahlias.

Hedges.—The lower shoots of deciduous hedges may now be shortened and the whole put into shape.

Lantanas, if lifted and put in a box or large pot, will do well through winter in a cellar. Trained to a bush form they improve in beauty each year.

Lawns.—New ones may be made. Grade, trench, or subsoil, and manure the plot. Sow clean seed early and roll and repeat the rolling before cold weather. Blue grass makes a lasting, uniform sod.

Perennials.—Take up, divide, and reset Dicentra, Paeonies, Phloxes, Clematis, Hollyhocks, etc.

Pinks and Carnations.—Pot rooted layers and winter in pits or cold frames, or in dry, cool cellar.

Seeds.—Save from best plants as fast as they ripen.

Shrubs.—All the hardy deciduous shrubs may be transplanted. Those native kinds which it is desired to remove to the grounds may be attended to this month. Mark them before the leaves fall.

Stocks and Wall Flowers.—Pot and remove to the pit or green-house before freezing weather.

Cold Grapery.

The only thing to be done is to favor the ripening of the wood. For this purpose the temperature may be slightly increased by closing the lower ventilators and admitting air only through the upper ones. Leave every leaf on the vine until it drops of its own ripeness. Close the house entirely where there is any danger of chilling frost.

Green and Hot-Houses.

The houses should have been in readiness last month. Remove tender things in-doors in good season, and let Azaleas, Camellias, and hardier plants be out until there is danger from frosts. In removing plants to the house, the pots will need cleansing, and all moss and weeds to be removed from the surface. It is a good plan to remove the old soil from the surface and replace it with fresh. The tropical collection will need some fire-heat. The general directions of last month apply to this.

Annuals may still be sown for winter blooming. A stock of Mignonette is always useful; more showy plants make the house brilliant in winter.

Insects.—See that the plants are clean from these when they are brought in, and keep vermin down.

Ventilation.—Air well, but avoid sudden changes.

Water.—Syrringe freely; keep atmosphere humid.

Apiary in October.

Prepared by M. Quinby—By Request.

Reports from different sections of our country, show a greater disparity in the honey yield than usual, this season. But few swarms have issued in any place. In some localities the bees have stored surplus honey in abundance, while in others they have too little food for winter. Too little honey, or too much, are both unfavorable conditions. The bees should have room to pack themselves in the empty cells, or they will suffer with cold in consequence. If too little honey is stored, they starve if not fed. The food given them is often not as well adapted to their wants as that collected from the flowers, and the chances of losing them in winter are increased; yet, with good attention, most of them may be kept. If it is desirable to keep such light colonies, they should be put in the best possible condition this month by feeding, that the honey may be sealed up before cold weather. They will add nothing more to their stores now, except in localities where few are kept, and the Golden Rod and the Wild Aster abound. It is mistaken kindness, and false economy that decide

never to kill bees however unfavorable their condition for wintering. Some colonies can not be wintered, and it is mercy to take life at once, rather than allow them to starve by degrees. Keep all the colonies that can be made profitable another year. Decide which are to be wintered. Feed the light ones to the required weight, not by weighing what is given them, but by ascertaining how much the hive has gained—robbing bees may carry it off as fast as it is fed. Feed at night, and as fast as they will take it up. Such as have too little comb to hold the stores (less than 1,200 cubic inches spare filled,) should be taken up, and the hive, with contents, after the bees are removed, be set away for another year. West India honey, or that strained from hives that have contained diseased brood, will do for feed, if scalded (boiled) and well skimmed. A queenless colony may have a colony of bees introduced, if it have sufficient stores, and is not injured by the moth. A colony working without a queen will store treble the usual quantity of bee-bread, and should weigh several pounds (8 or 10) more, to be safe for winter, than if it had had a queen. Send the surplus honey to market now. Turn the honey boxes bottom up, and pack in large cases that can be easily carried. Secure careful handling lest the combs be broken. In localities where foul-brood exists, the greatest care should be taken to remove it all. A colony thoroughly infected can not be cured; it will not swarm, is frequently lost in winter, will often become weak in summer, get robbed, and the disease will thus spread through other hives. The most profitable for owner, neighbors, and all concerned, is to break up all such hives, and save the honey and wax. A hive well filled with honey, having the brood diseased, must be taken now or all will be lost. Colonies that continue rearing brood later than usual, are often affected. Examine the old stocks as for queenless colonies, with the point of a knife removing the sealing of some of the cells of the brood combs that appear the oldest. Should the young bee while in the larva state, be dark colored, it is dead, and a few such should condemn the hive. Prevention in this matter, is better than cure. When all disease is removed, there is no risk of its spreading to others through the apiary. Colonies for winter should be strong bees at this time, extending through all the combs, but there is no advantage in having an unnatural number in one hive, as might occur if three or four strong colonies were united; but two or three weak ones may be put together advantageously. They seldom quarrel if smoked thoroughly with tobacco or puff-ball.

Commercial Notes.—Valuable Tables.

In the next column we present a series of Tables prepared expressly for the *American Agriculturist*, which give, in a very condensed and convenient form for study and reference, the various transactions in Breadstuffs, not only during the past month but for a series of years past. The figures are compiled from an immense number of records, partly from official sources and partly gathered by ourselves. These figures are believed to be thoroughly reliable, no labor or care having been spared to make them so. The tables tell their own story so plainly that there is little necessity for explanatory remarks.—It will be seen by Table 3 that the exports have fallen materially below those of the previous year—corn very greatly so. Flour has nearly equalled the average of 18 years, (Table 4); Wheat is double the average, while Corn sinks almost below comparison. The Tables present many other points of obvious contrasts. During the past four weeks, the Bread-stuff Markets have been very unsteady and unsatisfactory, owing to the violent fluctuations in gold, and we have no means of judging, even as to the immediate future. When gold falls, the value of Breadstuffs for export is decreased, and the whole market depressed. If, through military success or other causes, gold continues to decline, all exportable articles must necessarily fall, though the prices of Breadstuffs have not yet gone down as much as gold. The large dealers are holding back for high prices again; they are carrying their stock with borrowed funds, and a permanent decline would crush many large operators both here and at the West. Provisions have been affected by the same causes as Breadstuffs, but not to the same extent, and the speculators have maintained their firm rates remarkably well. Wool opened pretty briskly at advancing prices, but the fall in gold has recently brought business to a stand, and quotations are now altogether nominal. . . . Cotton, Seeds, Hay, Hops, and Tobacco,

opened buoyantly, with good inquiry, but closed heavily.

The following condensed, comprehensive tables, made up to Sept. 15, show the transactions the past month.

TRANSACTIONS AT THE NEW-YORK MARKETS.						
RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this m'th	349,500	1,215,000	1,329,000	2,000	51,000	1,254,000
24 days last m'th	396,500	2,309,000	1,318,000	11,500	31,000	757,000

SALES.						
	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this month	457,500	1,676,000	1,421,000	5,100	1,900	
24 days last month	467,000	3,172,000	1,584,000			

Comparison with same time last year.						
RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864	349,500	1,215,000	1,329,000	2,000	51,000	1,254,000
25 days 1863	335,000	1,734,000	2,019,000	48,250	62,000	491,000

SALES.						
	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864	457,500	1,676,000	1,421,000	5,100	1,900	
25 days 1863	397,000	2,675,000	2,513,000	64,500	7,000	

Exports from New-York Jan. 1. to Sept. 15.						
	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1864	1,553,382	10,998,797	709,293	453	31,185	
1863	1,882,899	11,700,100	7,292,261	409,157	116,097	
1862	2,254,501	15,393,811	8,640,113	1,631,646	66,357	

Exports of Breadstuffs from the United States to Great Britain and Ireland, each of 18 years, ending Sept. 1:						
	Flour, bbls.	Wheat, bush.	Corn, bush.	Rye, bush.	Barley, bush.	Oats, bush.
1864	1,241,804	16,492,523	717,434			
1863	1,479,413	28,167,190	10,234,356			
1862	2,672,515	25,754,709	14,064,163			
1861	2,561,661	25,553,070	11,705,034			
1860	717,156	4,888,714	2,231,597			
1859	106,457	430,010	342,013			
1858	1,226,430	6,555,643	3,317,502			
1857	849,600	7,479,401	4,746,271			
1856	1,641,265	7,976,406	6,781,161			
1855	173,309	234,427	6,679,138			
1854	1,846,920	6,038,003	6,049,371			
1853	1,600,449	4,823,519	1,425,278			
1852	1,427,442	2,728,442	1,487,397			
1851	1,559,384	1,496,325	2,205,601			
1850	574,757	461,276	4,753,358			
1849	1,137,556	1,140,194	12,683,260			
1848	182,563	241,500	4,390,236			
1847	3,155,845	4,000,359	17,157,559			
Grand total for 18 years	34,225,646	139,581,911	111,683,391			
Annual Average	1,345,869	7,754,247	6,168,522			

Exports from the United States to the Continent of Europe for ten years, each ending Sept. 1, 1864.						
	Flour, bbls.	Wheat, bush.	Corn, bush.	Rye, bush.	Barley, bush.	Oats, bush.
1864	100,511	333,819	13,969			
1863	219,579	2,243,314	88,267			
1862	626,672	8,617,472	328,074			
1861	142,129	3,452,496	101,145			
1860	49,243	178,031	19,258			
1859	51,388	57,845	25,519			
1858	380,100	960,428	16,648			
1857	483,344	2,575,653	543,590			
1856	748,408	2,610,079	282,083			
1855	7,763	4,972	308,428			
Total for 10 yrs	2,736,137	20,864,109	1,701,371			
Annual Average	273,614	2,086,411	170,137			

Receipts of Breadstuffs at the head of tide water at Albany, by the Erie and other New-York Canals, from the Commencement of Navigation, May 1st, to and including Sept. 9th, in the years indicated.						
	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1861	661,100	13,340,000	11,553,000	445,000	296,000	3,115,900
1862	888,206	18,382,800	11,721,500	831,300	381,100	2,509,400
1863	743,100	10,935,000	15,850,700	264,000	79,900	5,157,500
1864	556,200	9,938,300	5,357,200	50,000	166,100	4,979,300

The following table gives the wholesale prices at the two dates of going to press, but each day almost, extensive fluctuations in these prices are experienced.						
CURRENT WHOLESALE PRICES.						
	Aug. 15.	Sept. 15.		Aug. 15.	Sept. 15.	

	Aug. 15.	Sept. 15.		Aug. 15.	Sept. 15.	
FLOUR—Super to Extra State	\$9 10	\$9 35	WHEAT—All kinds of White	2 25	2 25	
Super to Extra Southern	10 45	10 50	All kinds of Red	2 15	2 05	
Extra Western	9 65	9 85	CORN—Yellow	1 54	1 55	
Extra Genesee	10 60	10 40	Mixed	1 31	1 32	
Superfine Western	9 10	9 50	OATS—Western	98	98	
RYE FLOUR	8 50	8 50	State	97	98	
CORN MEAL	7 90	8 50	RYE	1 95	2 00	
WHEAT—All kinds of White	2 25	2 25	BARLEY	Nominal	Nominal	
All kinds of Red	2 15	2 05	COTTON—Middling, per lb.	1 72	1 73	
CORN—Yellow	1 54	1 55	HOPS, crop of 1863, per lb.	18	18	
Mixed	1 31	1 32	FEATHERS, Live Geese, p. lb.	Nominal	Nominal	
OATS—Western	98	98	SEED—Clover, per lb.	Nominal	Nominal	
State	97	98	Timothy, per bushel	Nominal	Nominal	
RYE	1 95	2 00	FLAX, per bushel	Nominal	Nominal	
BARLEY	Nominal	Nominal	SCGAB—Brown, per lb.	18 1/2	19	
COTTON—Middling, per lb.	1 72	1 73	MOLASSES, New Orleans, p. gal.	1 00	1 20	
HOPS, crop of 1863, per lb.	18	18	COFFEE, Rio, per lb.	47	50	
FEATHERS, Live Geese, p. lb.	Nominal	Nominal	TOBACCO—Kentucky, &c. p. lb.	14	14	
SEED—Clover, per lb.	Nominal	Nominal	Seed Leaf, per lb.	25	25	
Timothy, per bushel	Nominal	Nominal	Wool—Domestic fleece, p. lb.	90	1 15	
FLAX, per bushel	Nominal	Nominal	Domestic, pulled, per lb.	80	1 10	
SCGAB—Brown, per lb.	18 1/2	19	California, unwashed	30	35	
MOLASSES, New Orleans, p. gal.	1 00	1 20	TALLOW, per lb.	19	19 1/2	
COFFEE, Rio, per lb.	47	50	Oil, Cake, per ton	70 00	77 50	
TOBACCO—Kentucky, &c. p. lb.	14	14	PORK—Mess, per bbl.	39 00	39 50	
Seed Leaf, per lb.	25	25	Prime, per bbl.	34 00	34 50	
Wool—Domestic fleece, p. lb.	90	1 15	BEEF—Plain mess	17 00	17 00	
Domestic, pulled, per lb.	80	1 10	BUTTER—Western, per lb.	38	40	
California, unwashed	30	35	State, per lb.	40	45	
TALLOW, per lb.	19	19 1/2	CHEESE	18	28	
Oil, Cake, per ton	70 00	77 50	BRANS—per bushel	Nominal	2 50	
PORK—Mess, per bbl.	39 00	39 50	PEAS—Canada, per bushel	1 92	2 00	
Prime, per bbl.	34 00	34 50	EGGS—Fresh, per dozen	22	25	
BEEF—Plain mess	17 00	17 00	POULTRY—Fowls, per lb.	18	20	
BUTTER—Western, per lb.	38	40	Turkeys, per lb.	20	21	
State, per lb.	40	45	Spring Chickens, per pair	75	80	
CHEESE	18	28	POTATOES—Merced, p. bbl.	5 50	6 00	
BRANS—per bushel	Nominal	2 50	Peach Blow, per bbl.	5 00	5 50	
PEAS—Canada, per bushel	1 92	2 00	Dykemans, per bbl.	5 00	5 50	
EGGS—Fresh, per dozen	22	25	APPLES—Western, per bbl.	3 00	4 00	
POULTRY—Fowls, per lb.	18	20	Apples—Fall Pippins, per bbl.	3 50	4 50	
Turkeys, per lb.	20	21	Apples—Common, per bbl.	2 00	2 50	
Spring Chickens, per pair	75	80	PEACHES—Delaware, per basket	1 25	1 50	
POTATOES—Merced, p. bbl.	5 50	6 00	PEACHES—Jersey, per basket	1 25	2 00	
Peach Blow, per bbl.	5 00	5 50				
Dykemans, per bbl.	5 00	5 50				
APPLES—Western, per bbl.	3 00	4 00				
Apples—Fall Pippins, per bbl.	3 50	4 50				
Apples—Common, per bbl.	2 00	2 50				
PEACHES—Delaware, per basket	1 25	1 50				
PEACHES—Jersey, per basket	1 25	2 00				

N. Y. Live Stock Markets.—**BEEF CATTLE.**—The average number of cattle received weekly, has been 5,970, nearly 1,300 greater than last month; but there have been many grass-fed heaves, of inferior quality and light weight, so that the supply has not much exceeded the demand. The market closed last month on the advance, and showed a steady upward tendency until the past week, when an unusually large supply depressed prices $\frac{1}{2}$ ¢. Prime heaves are scarce, and sell at about $18\frac{1}{2}$ ¢. $\frac{1}{2}$ lb., dressed weight; Medium to good, $14\frac{1}{2}$ ¢. $\frac{1}{2}$ lb., and thin, light stock at $8\frac{1}{2}$ ¢. $\frac{1}{2}$ lb.

Milk Cows.—Average weekly supply 120. Poor cows sell slow; good, prime, and extra milkers are in fair demand. Prices range from \$40 to \$70, for medium to good cows, and \$90 to \$100 or more, for choice.

Calves.—Receipts average 2,133 per week. Good veals sell at $11\frac{1}{2}$ ¢. $\frac{1}{2}$ lb., live weight, and choice at $13\frac{1}{2}$ ¢; grass-fed at $14\frac{1}{2}$ ¢ per head, according to quality.

Sheep and Lambs.—Weekly supply, 19,753, against 15,948 last month. Prices have been variable, but close at a material advance over last month, on good stock—inferior quality rising to a limited extent only. Good sell at $8\frac{1}{2}$ ¢. $\frac{1}{2}$ lb., live weight, and $9\frac{1}{2}$ ¢. for selected animals; stock sheep at $4\frac{1}{2}$ ¢ per head.

Live Hogs.—Weekly average, 7,593. Prices, $12\frac{1}{2}$ ¢. $\frac{1}{2}$ lb., per lb., live weight, for fat hogs; an advance of nearly 1¢; stock hogs bring $7\frac{1}{2}$ ¢. $\frac{1}{2}$ lb.

U. S. 7-30 LOAN.

The Secretary of the Treasury gives notice that subscriptions will be received for Coupon Treasury Notes, payable three years from Aug. 15th, 1864, with semi-annual interest at the rate of seven and three-tenths per cent. per annum,—principal and interest both to be paid in lawful money.

These notes will be convertible at the option of the holder at maturity, into six per cent. gold bearing bonds, payable not less than five nor more than twenty years from their date, as the Government may elect. They will be issued in denominations of \$50, \$100, \$500, \$1,000 and \$5,000, and all subscriptions must be for fifty dollars or some multiple of fifty dollars.

Convertible into a Six per cent. 5-20 Gold Bond.

In addition to the very liberal interest on the notes for three years, this privilege of conversion is now worth about three per cent. per annum: for the current rate for 5-20 Bonds is not less than nine per cent. premium, and before the war the premium on six per cent. U. S. stocks was over twenty per cent. It will be seen that the actual profit on this loan, at the present market rate, is not less than ten per cent. per annum.

Its Exemption from State and Municipal Taxation.

But aside from all the advantages we have enumerated, a special Act of Congress exempts all bonds and Treasury notes from local taxation. On the average, this exemption is worth about two per cent. per annum, according to the rate of taxation in various parts of the country.

It is believed that no securities offer so great inducements to lenders as those issued by the government. In all other forms of indebtedness, the faith or ability of private parties, or stock companies, or separate communities, only, is pledged for payment, while the whole property of the country is held to secure the discharge of all the obligations of the United States.

SUBSCRIPTIONS WILL BE RECEIVED by the Treasurer of the United States, at Washington, by all National Banks which are depositaries of public money, and

ALL RESPECTABLE BANKS AND BANKERS throughout the country will give further information and AFFORD EVERY FACILITY TO SUBSCRIBERS.

Iona Grapes.—By an accident, that part of C. W. Grant's advertisement which had reference to this excellent grape, was omitted in the September *Agriculturist*. It is printed in full in the present number.

A CARD.

I take this opportunity to return my warmest thanks to my worthy Editorial Associates, and Business Assistants, for their constant, earnest, and laborious attention to the interests of the *Agriculturist*, and of its readers, during my long absence. After so many years of close application, it is a great relief to feel that my labors can be so well shared by others. I trust none of the readers have found any lack of interest or instruction in the pages of this journal, while it has been without the direct supervision of its responsible Proprietor.—I desire further to thank the numerous correspondents who have patiently endured the non-attention to their personal letters and favors; and also to express my gratitude to the many friends, neighbors, and distant readers as well, for their kind attentions, and oft-repeated inquiries after my health and welfare. Such manifestations beget a strong desire to live yet longer, to reciprocate this kindness and to labor further to promote the comfort and happiness of my friends, among whom I love to reckon every member of the Great Agriculturist Family.

This long sickness and slow recovery are new for me, having never before been confined a dozen days at a time by actual disease, while now I have remained seventy long days and longer nights, within these walls. But the emaciated muscles are nearly filled up, and they are coming again under the control of the will. For once I have looked into the favorite old rooms at 41 Park Row, and I am almost able to go there daily now.

I do not regret the past summer—its labors, its suffering in mind, body, and business interests. I am assured that many a brave soldier has been saved from suffering, that many are alive, and others in possession of their limbs, who would have fared quite otherwise, but for the little part I have been able to take in the great work of caring for them, by being personally near the great battle fields,—and with this inward reward I am quite content.

Flushing, Sept. 16th, 1864.

ORANGE JUDD.

Strawberry Plants—Some Delay in Sending—Few Mailing Boxes—Explanation.

We have had a world of trouble, expense, and vexation, in getting the Strawberry Plants off—quite enough to make a well man sick, and therefore hard indeed upon one already weakened by 70 days confinement by disease. As our readers are interested, we will explain:

I. By an expense of about \$40 per week, during nearly a year, in preparing the ground, manuring, dividing and weeding the plants, guiding and setting every runner, watering during the severe drouth, we succeeded in getting our small original stock up to at least 90,000 good plants by Aug. 30th, with prospect of more.

II. The names of all applicants were arranged in order of reception upon labels specially prepared for boxes, all written and stamped, and twenty persons were engaged to begin the work of distribution, August 30th.

III. Last spring we originated a plan of sending plants in wooden cases or boxes, and invited plans and proposals. Out of many specimens received, the simplest and best, as appeared to us from the samples and explanations, was that described in the July *Agriculturist*, and with unhesitating faith in the plans, facilities and ability of the proposer, on June 18th we contracted with him for 50,000 boxes to be delivered the middle of August, and 5,000 a day more until fully supplied. We were so absorbed in the care of the wounded in Virginia, that we did not exercise our usual vigilance in personally looking into the contractor's manufacturing facilities. This was our chief error. After being brought home sick, we at the first possible moment sent an inquiry after the progress of our pet boxes, and was informed that they would be on hand in time all right. The Distribution was announced in good faith to begin August 30th. The middle of August, the 20th, the 25th, came, yet no boxes; but we received positive assurance that there was only a little delay in getting mechanics to finish up the machinery, and they would be ready in time.—August 30th came and our hands were all ready, but no boxes. Trusting in the promise that they would certainly come in a day or two, our packers were partly busied in sending off the larger parcels by mail and express, out of the regular order.—Sept. 4th, still no boxes. Unable to leave our room, we sent men to carefully look into the matter, and to our utter astonishment they found the machinery quite incomplete. They were at once directed to spare neither money nor exertion, day or night, to get the machinery done, and the boxes delivered at the earliest possible moment. Several hundred dollars were paid out, (\$300 to \$400 more than the contract for all the boxes called for.)—Sept. 9th, machinery reported all done, and up, and adjusted, and re-adjusted, but "it don't work"!—So much for being unable to see to our business, and know that all was going right.—Well, here we were,

Sept. 9th—the season passing, the plants getting too large almost, the subscribers looking for them, the wrappers all prepared for a particular kind of boxes, with a costly lot of postage stamps stuck fast to them, and not fitted for any other form, and—the "beautiful machinery a failure"! We were sick at heart, at head—all over—and most so that we were not fulfilling to the letter, and day, our promise to our readers. We hope, and believe they will excuse us, after this statement of the case. As the next resort, Mr. Olm commenced with the old method by which we had successfully sent out 50,000 other plants in previous years. This was afterward improved upon. Over 40 persons are putting up and sending 4,000 to 6,000 a day, and this rate will be increased. We shall fill all applications to this date before Sept. 26th, and all further applications by the 30th. Others called for hereafter can be sent any time in October, and during part of November, except at the far north. To future applicants from the more northerly regions, we will send the plants next spring if requested. The club parcels of over six plants were sent off prior to Sept. 9th, while waiting for the boxes, which were designed for single plants or less than six. Experiments are still being made with the box machinery, and part of our readers will receive plants in boxes.—The only satisfaction in this vexatious delay, is, that the cool weather now prevailing is better adapted to the sending of the plants securely by mail, than the warm weather of the first of the month.

We have been taught one lesson, which we thought we knew before, viz., not to rely implicitly upon the plausible statements and promises of any man, in a matter of importance. The contractor, in this case, doubtless expected to do as he at first promised, but failed in ability and means to carry out his own intentions—"on time."



Containing a great variety of Items, including many good Hints and Suggestions which we throw into small type and condensed form, for want of space elsewhere.

"Won't Stick"—New P. O. Stamps Wanted.—We suggest to the Postmaster-General that among his many valuable improvements in the mail service, the postage stamps greatly need looking after. The two-cent stamps are brittle and badly gummed. When placed upon a freshly printed newspaper they damp off very soon. The recent law wisely encourages the introduction of new plants, seeds, cuttings, etc., by charging only 2 cents for 4 ounces. All living plants must be mailed a little damp, not wet; yet the slightest dampness within sweats off the Post Office stamps, and the receiving Postmasters frequently collect the postage anew. Stamps are greatly needed that are backed with an adhesive gum which will not so soon cleave off as those at present supplied, especially of the two-cent variety so much used for newspapers, plants, etc. We speak from experience, having used about a hundred thousand stamps the past month in sending out plants to our subscribers, etc., and we seldom use so few as 1000 stamps per week.

A Splendid Array of Fruits, Trees and Plants is offered by the nurserymen advertising in the present number, unequalled in number and variety, we believe, by any previous list. A perusal of the items will be instructive, by indicating the advancement being made in this direction, as well as profitable in directing where to purchase. Besides these, many desirable articles for the farm, the garden and the household are brought to notice, which will well repay examination. It is a satisfaction to know that none but parties believed to be reliable are permitted to use these columns at any price. Advertisers express themselves so well pleased with our request for parties writing to them to always state where their business cards were sent, that we therefore again request that this be uniformly done.

Kentucky Blue Grass.—Several readers of the *Agriculturist* living in Iowa, Minnesota and Wisconsin, inquire for the experience of practical men in those States in seedling down to Blue Grass.

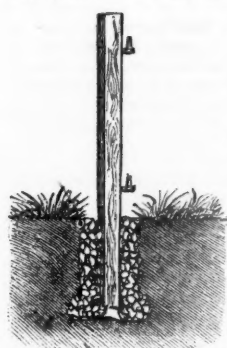
Peaches on Wild Plum Stock.—Those who have these will do well to advertise, as there are several inquiring where they can be obtained.

New uses for Corn Husks.—In Austria a new manufacture has been for a year or two in successful operation and constantly increasing. Corn husks are digested several days in hot water, and then separated into (1st) coarse hemp like fibres, the veins of the husk; (2d) a pasty substance which constitutes a portion of the filling between the veins; (3d) a pulp used for mak-

ing paper is left. The first is made into cordage or coarse cloth; the paste is used or may be used for food, being mingled with flour for making bread. The paper pulp is of a pure white and makes a beautiful quality of paper. The manufacture has progressed to its present state of perfection gradually, as at first the entire plant was used to make a coarse paper. Now on account of the other products, a paper of great excellence is made at a very low cost. In August of last year the Imperial paper mill in Austria was prepared to use 100,000 lbs. of husks per week, and to purchase 50,000,000 lbs. after harvest. This manufacture is likely to increase, and no other country affords so fine a field for it as our own.

Concrete Setting for Fence Posts.

There is constant inquiry for some means of setting fence posts so that they will not heave by the frost.



The following is suggested as offering at an expense of a few cents per post, an effective way. A hole is dug about as large as a flour barrel, but wider at the bottom than at the top, on two sides at least. The post is set upon a stone laid in the bottom and the hole is filled up rapidly with concrete made of good hydraulic cement, mixed with half as much again sharp sand or gravel as would be used in making builders' mortar; and during the filling, as many clean stones, large and small, are thrown in as can be buried in the mortar. Posts thus set will be firm as rocks, and will not decay below ground.

Preserving Timber, Posts, etc.—

"Subscriber," of Iowa, asks, What is the process called "Kyanizing"? It is the impregnation of timber with corrosive sublimate (chloride of Mercury). The name is also loosely given to impregnating timber with other metallic salts. "Burnetizing" is filling the pores of wood with chloride of zinc, which is by far a cheaper salt. Blue vitriol (sulphate of copper) is also extensively used. It is better to use green or unseasoned than dry wood, and softer kinds of wood are more easily impregnated than the close, heavy kinds, like oak. Wood of rather open pores, elm, poplar, Scotch fir, larch, and even beech, may be thoroughly impregnated by setting it on end, covering the top end with an air-tight cap, connected by a tube with a tank containing the liquor set some 30 or 40 feet higher. The pressure forces the sap out at the other end, and when the liquid appears, the process is ended. The wood is also placed in air-tight cases, and the air exhausted by an engine, and the liquid then admitted, which is forced by the pressure into the pores which have been emptied of the air. They use about 100 parts of water to 1 of blue vitriol or 1½ of chloride of zinc.

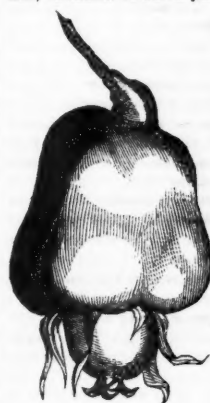
Lice on Cattle.—"Logan." A judicious use of mercurial ointment will destroy lice on calves and all neat cattle; mix it with 3 or 4 times as much lard and apply a mass as large as a hickory nut behind the horns and along the back. It is dangerous used carelessly.

Snaring Woodchucks.—A. R. Taylor gives his method of catching woodchucks: A slip-noose about 4 inches across is made of fine copper wire; the wire extends about six inches beyond the loop and is fastened to a stake by a piece of strong cord. If the wire is fastened to the stake, the animal will twist it off; as he always bites at the wire near his neck, there is no danger of parting the string. The wire noose is placed at the mouth of the hole and catches the animal as he comes out. If the snare is pushed aside, it is too small and must be made larger, and if the hole is very large, it must be partially closed by a stone or piece of turf. The engraved diagram shows the stake, twine and wire noose.

Wool Washing.—"What deduction ought to be made for unwashed wool?" This question we are glad to see is being discussed a good deal among farmers. It is better for the farmers not to wash the wool on the sheep's back. When wool is unwashed, dishonest farmers can cheat more easily than if it is washed clean. No doubt the deduction of one-third is far too much on an average, and covers loss to the buyer even in very bad lots. What is a just deduction? A subscriber in Maryland washes his fleeces with great success in Doty's

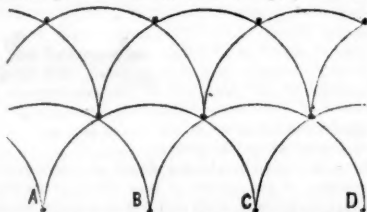
Washing Machine, the fleeces coming out beautifully clean, and in excellent order for sale or for carding.

A Queer Freak of a Pear.—Those who have paid any attention to the structure of plants, are aware that all their parts are considered as root, stem, or leaf, modified to serve particular ends. The flower is really a cluster of leaves adapted to a particular purpose, and the fruit is sometimes a modified, fleshy leaf; sometimes, as in the strawberry, the soft and pulpy end of the stem; and again, as is shown in the fig, (page 295,) it is a hollow, fleshy stem, with the remains of a vast collection of flowers. In the pear and apple, both the end of the stem and the calyx or leafy portion of the flower, become soft and juicy to form the fruit, and the points of the calyx usually remain at the top of the fruit, or at the end opposite the stem.



Mr. I. Buchanan recently called our attention to some curious pears produced from a second crop of blossoms in his grounds at Astoria. There was a cluster of three, all curiously malformed. We have figured two of these of the natural size, the older and larger one is much like fig. 1, and both show the curious appearance of one fruit proceeding out of another. The sepals, or part of the calyx, are much enlarged, and stand around the secondary fruit, while from the apex of this there is a small projection indicating an attempt to produce a third. A dissection failed to show clearly the nature of these supernumerary fruits. The smallest specimen, fig. 2, has the parts of the calyx converted into small but well developed leaves, like the ordinary ones of the tree, showing that the calyx is really modified leaves and that this is an attempt at what is called "retrograde metamorphosis."

Planting Quincunx.—This is a desirable method of setting trees, in which the trees in one row are opposite the intervals of those in the next one. "V. G. P." finds the following the easiest way to obtain the exact distances. First lay out the first row, A to D, and mark the places for the trees at the proper distances.



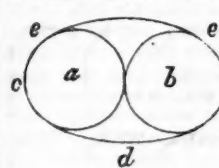
This can be done quickly by means of a cord of the right length, with a pointed stake of hard wood at each end. Setting one stake at A, the other will mark B, then the first stake can be carried over to C, and so on. Now to get the places for the next row, set one stake at B, and strike a semi-circle with the other and continue doing so from every place marked for a tree in the first row. The point where these semi-circles cross will indicate the places for the second row, and by using these points as pivots, the places in the third row will be found. The diagram will enable one to understand the manner of working. The dots represent the places for the trees.

Rosin Production in Michigan.

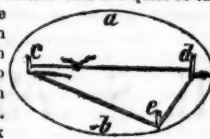
J. D. Sturtevant, of Muskegon Co., writes: "This season has been so dry that the farmers on our oak openings were obliged to resort to some other business besides farming for a living. Some two or three have experimented in rosin from the common white pine. The White Turpentine is saved as you propose on page 265 (Sept. No.), and simply boiled down, thereby losing all the oil or spirits of turpentine, but saving the rosin, a

sample of which I send for your table. They think they can make money at it at one-half present prices, (\$40 to \$50 per bbl.) There are several going into the business on a larger scale another spring."—The sample is light colored, clear and free from specks, a very nice article.

Laying out Ovals.—It is often desirable to make an oval bed, and it is impossible to do it correctly by the eye. G. G. Crowley, strikes two circles, as shown in the diagram, which may be done by means of two sticks and a string. Then set the sticks upon the string as far apart as from



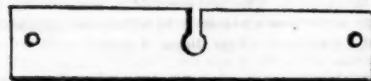
b to c, place one point below d, which may be formed by moving it until the other point will touch e, e, and complete the oval. The figure may be lengthened by placing the circles further apart. This is, however, not a regular oval, but parts of four circles. A true oval, which is the same at each end, is mathematically an ellipse. Such a figure is most conveniently laid out by marking out a straight line exactly where the long diameter of the oval should be, and setting two stakes, c, d, fig. 2, on this line not quite so far apart as you wish to have the length of the oval. Then pass a cord around both stakes and draw it out to about the width you wish the oval to be, and tie it. Then with a pointed stick at e, fig. 2, held within the cord as represented, draw the curve which will result from moving the stick, e, around, keeping the cord taut all the time. A very little shifting of the stakes, c and d, and a slight variation of the length of the cord will enable one to change the shape of the oval from a very long narrow ellipse to nearly a circle.



Plants to be Named.—Several persons have sent leaves only, which can not be identified with any certainty. Wm. Hall, Vernon Co., Wis., sends *Echinocystis lobata*, noticed in Sept. Basket. Kate S. Wright; *Ampelopsis quinquefolia*, or Virginia Creeper, grown in shade. A. J. L., Randolph Co., Ind., the shrub is the Shubby St. Johnswort, *Hypericum prolificum*, and worth cultivating. L. B. P., Weston, Vt. The shrub is not the Jersey Tea, but the Bush Honeysuckle, *Diervilla trifida*, closely related to the *Weigela*, from China, now much cultivated; the creeping thing is *Potentilla argentea*, the Silvery Cinquefoil, very common in barren soils. M. R. A., *Celastrus scandens*, figured in August *Agriculturist*. H. J. Ackerman; No. 1, is Golden Coreopsis, *Coreopsis tinctoria*, and No. 2, is Feverfew, *Pyrethrum Parthenium*, both common in gardens. Lizzie W., West Charleston, O., Queen of the Prairie, *Spiraea lobata*, a fine native species worth removing to the garden. W. Ford, Rutland Co., Vt., and M. R. Dale, Daleville, Pa., *Adlumia cirrhosa*, a beautiful climber, called Climbing Fumitory and Alleghany Vine. A. R. Gale, Fillmore Co., Minn.; *Gentiana crinita*, the Fringed Gentian, a beautiful late bloomer, in low grounds.

A Convenient Help in Tree Planting.

An account of a very simple contrivance for securing straight rows in orchard planting, was published in the *Agriculturist* for April, 1859. This article and the figure has been used by several journals without any credit, and we take this occasion to reclaim it, as well as to bring it to the attention of recent subscribers. The apparatus is simply a board about 8 feet long, with an augur hole near each end, and an opening from one side to the center, large enough to receive the tree. The diagram shows the shape. Besides this, a number of wooden pins will be required. Mark out the ground and put a stake in the exact place where each tree is to stand. Put the board down, with the center opening over the



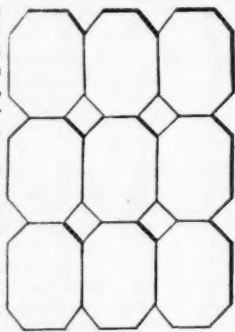
stake, and drive two pins into the ground through the holes near the ends of the board. The board is now lifted off, leaving the pins in the earth, and the hole is dug for the tree. After the hole is made, replace the board on the pins, and the center opening will give the exact place occupied by the marking stake, and consequently the place to set the trunk of the tree, which may be introduced through the side opening in the board, and held there while the hole is being filled.

Grafting Grapes.—S. C. Frey, Clark Co., O., grafted his Isabella vines last autumn, with Delawares, according to the directions given in the September *Agriculturist* of last year. Mr. F. is so well pleased

with his success that he considers this hint alone worth many years' subscription. The excellent results we have seen induce us to recommend those who wish to graft their vines to try it this season, after the leaves fall, and any time before the ground is frozen. As the article is rather long, it is not possible for us to reprint it, and we refer to the Sept. No. 1863, which can be procured by those not having last year's volume, by sending 12 cents.

Slate for Strawberry Beds.—Rev.

C. E. Little, Rutland Co., Vt., covers his beds with roofing slate. The usual size of the slate is 6x12 in., the corners are clipped from each slate by resting it on the edge of a board, and striking a blow with the side of a heavy chisel, and the slates are put together, as in the diagram. The slates are laid on the bed as the plants are set out, and the bed is surrounded by a board edging to keep them in place. The diamond shaped spaces in the diagram represent openings, where four slates join, and through which the plants grow. In England, tiles made for the purpose, are used in a similar manner to force the plants. Where slate can be readily obtained it may be worth while to experiment upon a small bed; Mr. L. claims several advantages for this method: that it saves labor of weeding; that it acts as a mulch, preventing evaporation, while the cracks between the slates allow the rain to pass through; that the slates absorb heat and hasten the ripening of the fruit; that runners are kept from taking root; and that the berries are kept clean.



Native Gooseberries. — "Progress," York Co., Me. The Houghton is said to have originated from the wild gooseberry, and doubtless other varieties might be obtained in this way, but we should rather start with the seeds of an improved sort like the Houghton.

Is the Currant a Berry? asks "An unconvinced Enquirer." Yes, and so is the gooseberry, huckleberry, grape, cranberry, tomato, egg fruit, etc., and so are not the raspberry, blackberry, strawberry, mulberry, etc. A berry is any fleshy fruit resulting from the ripening of a single pistil. The raspberry, etc., are collections of fruits from numerous and distinct pistils. Oranges and lemons are berries with very thick rinds. The berries of the gourd, squash, etc., where the rind becomes hard, are known as *pepo*, or gourd fruit.

Grapes and Apples in Virginia.—

A. D. Ottarson, Jefferson Co., N. Y. The vine would doubtless do well on the banks of the Potomac. Norton's Virginia is one of the most prominent wine grapes; but before planting largely visit the vineyards of Missouri. The Baldwin seldom does well in southern localities.

Striking Cuttings.—"H. O. B." Oskaloosa, Iowa, thinks that the method described on page 49 (Feb.), "is a humbug," as he tried it and failed. We have tried it and succeeded finely. All summer we have had a dish of wet sand in a handy place, and have put into it *Verbenas*, *Petunias*, *Geraniums*, of various kinds, *Weigela*, *Ivy*, *Pilea*, *Cupheas*, etc., etc., and have seldom failed to get roots. Try it again Mr. B.

Notes on Grapes.—From the number of samples of fox grapes which are sent for our opinion, it would seem that there are many persons who never tasted a good grape. The wild fox grapes vary greatly in size and color, and only differ in quality by some being a little worse than others. The best are only fit for wild boys and pigs, and no one who has tasted a Delaware, or a well ripened Catawba, will ever think of eating such fruit. The berries of the fox grape are often very large, globular or depressed (not elongated), with a very tough skin, a hard pulp containing three or four very large seeds, and a strong aroma which some persons profess to like, but which is exceedingly disagreeable to most people of cultivated taste. Grapes sent by S. D. W. and by A. Richardson, are of the common fox species. Mr. R. states that his were raised from a raisin seed.—There must be a mistake, and the vine came from a seed already in the earth. No raisin seed could produce a fox grape. These and other similar specimens are utterly worthless, and the vines are occupying space which might be filled by good sorts.... *Hartford Prolific*: It has been unusually good this season. Its earliness is a very great recommendation.... *Rogers' Hybrid No. 3*: medium sized bunch, round

berry of the color of the Diana. Ripe around New York the last of August. Sweet, and agreeable. Shows no signs of being a hybrid... *Israella*: originated by C. W. Grant, very sweet, black, and ripening about middle of August, it promises to take the lead as an early variety... *Underhill's Seedling*: Early, very sweet, but it has a thick skin and tough pulp, and can not be recommended... *Iona*: Mr. Fuller gave us the last week in August fine specimens of this really excellent grape. It is first class in every respect, and should it prove suited to widely different localities, it will become a leading variety.... *Concord*: Van Wyck and Johnson, Dutchess Co., N. Y., show four bunches of this variety which together weigh within 1 ounce of 3 lbs. They are covered with a fine bloom and are the best specimens we have seen.... *Delaware*: the same exhibitors show fine bunches of this splendid sort, three of which weigh 1 lb. 1 oz., and in size of berry excel any we have yet seen. The Delaware is apt to overbear when young, and this should be guarded against.... C. S. Halsey, N. Y., sends a seedling supposed to be from the Delaware. It may improve as the vine grows older, and is worth a further trial.

"American Grape Culture."—Conrad Witter, of St. Louis, Mo., has just published a neat little book on this subject in German, by Fried. Muench, of the same State, under the title "*Weinbauschule*." The directions are very concise, but clear, and it is written in the pleasant style which has given the author so high a place among the German writers of America. An English Edition is promised.

Grape Pies—New and Good.—E. Kalle, Rushville, O., writes: "I have seen a good deal of grape pies, but never ate any as good as my wife makes. I would recommend every housewife to try her plan which is as follows: Pop the pulps out of the skins into one vessel and put the skins into another. Then simmer the pulp a little and run it through a colander to separate the seeds. Then put the skins and pulp together and they are ready for jugging or for pies. Pies prepared in this way can hardly be distinguished from plum pies."

Planting Small Fruits.—S. A. Smith, Green Lake Co., Wis., and others. Currants, gooseberries, raspberries, etc., may be planted in October. If done as soon as growth stops, the plants get well established, and on dry land, do better than spring planting.

Insects to be Named.—Some one has left a most singular caterpillar, found on a pear tree. In order to show it, it is necessary to give two views of the animal. Fig. 1, is taken, looking directly down upon its back; it appears completely overspread with a cloak or broad shield, which is dark brown and covered with short hair, and at the edges cut into long and un-



Fig. 1.

equal points or teeth. This cloak entirely hides the insect from view, and to see it, it is necessary to turn it sideways, as in fig. 2. It is a caterpillar of the size shown in the figure, and having very short feet it moves with a very smooth gliding motion. On account of their slug-like movements the genus to which it belongs is named *Limacodes* (slug-like), and popularly called Hag-moths, from the wrinkled appearance of the caterpillars. The species can not be made out without seeing the perfect insect.

Another of an allied species was found on some grapes on our table. It had instead of the tunic, a horny shell. They turn into small brownish moths. Many insects, caterpillars especially, have been received in a condition which renders it impossible to identify them, and others have been laid aside for future study and report.

The Gopher.—T. M. Harley, Cedar Co., Ia. says that the statement quoted from Audubon on page 77 (March) to the effect that these animals do not carry dirt in their pouches, is wrong. He has himself seen them come from their holes with their pouches filled with earth and discharge it by quick strokes with their paws.

Steam Plowing—Meeting of the Royal Agricultural Society.—At the recent meeting and exhibition, at Newcastle, the chief interest was in the trial of steam cultivators, of which seven were exhibited. One machine was withdrawn, and in the course of the very severe tests which the trial elicited, no breakage of any account nor accident of importance occurred. The prizes have especial interest to us, as an American secured and shipped the 1st Prize machine to this country, and we may therefore expect soon

to record trials on our own soil. The awards were:—1st Prize "For best application of steam power for cultivation of the soil," to John Fowler, £100. 2nd do. do. John Fowler, £50. 1st Prize "For best application of steam power adapted for small occupations," John Fowler, £50. 2d do. do. J. & T. Howard, £25. "Best plow for steam power," John Fowler, £20. 2d do. do. J. & F. Howard, £10. "Best cultivator for steam power," John Fowler, £17.10s. "For the best Steam cultivator and ridging plow combined," J. & F. Howard, £12.10s.

Other prizes were given, and "high commendation" for various improvements and articles connected with the new business, of which John Fowler came in for his full share. We understand that 100 of Fowler's engines complete are ordered for Egypt, and others for various other countries, particularly where cotton cultivation is being vigorously pushed.

Sorghum Cane Mills.—By a mistake the cut of an old-fashioned Cane Mill was inserted (in August No.) in the illustrated advertisement of Messrs. Blymyers, Bates & Day, of Mansfield, Ohio, not Cincinnati, as, apparently by a fatality, another error located them. Their Victor Cane Mill is several years ahead of the antiquated picture referred to.

Make a Sketch.—It often happens that communications are received which give an account of some implement or contrivance, apparently new and useful, but so imperfectly described that we can not be quite sure that we get the author's meaning. A sketch with the pen or pencil, no matter how roughly done, will often save a deal of guessing. If an engraving is desirable, our artists will put it into the proper shape.

Neglected Grass Lot.—"S," your 2 acre lot which you want to keep in grass, and which is so much run down, ought to be "taken up" and well manured, and cultivated with hoed crops for a year or two, and then seeded down either alone or with a grain crop. Or you may manure and plow this fall and seed down along with spring wheat. Or if you are bound not to plow it, give it a good top-dressing at once, and in spring sow plaster and wood ashes—a pretty liberal supply.

Deep Working Heavy Soils.—"A. S.," asks for the experience of readers of the *American Agriculturist* in deepening clay soils by subsoiling, that is, simply stirring the subsoil, or by bringing the subsoil upon the surface, as by the Double or Michigan plow. The former may be practised without danger to the immediately succeeding crops, but deepening of all clays, heavy loams, or gravelly soils, with hard-pan underlay, must be gradual, or the land may be spoiled for a year or two, and sometimes longer, by mingling with the soil the deleterious, and even poisonous substances in the untamed substratum. We shall always be happy to receive the facts and views of our readers on this subject.

Ice-House Queries.—"P. G.," the room 15 feet square in your cellar might do very well as an ice-house. Make an inner wall on all sides, and fill with sawdust, cement the ground to form a basin, and provide drainage as described on page 291, and have a good sized ventilator communicating with the outer air at the top. It will have a greater or less effect on the temperature of the cellar, according to the thickness of the walls.... "J. G. H.," Berkshire Co., Mass. The object of ventilation is to remove the damp air from above the ice, to keep the surface covering of straw dry, and thus interpose a non-conductor of heat between the ice and the roof, which becomes of necessity more or less heated. When the air is damp, as it is when in contact with the wet straw, and there is no ventilation, the melting of the ice upon the surface is often quite rapid.... Joseph Mayer, Rockford Co., Ill. There is no reason why Western people may not make excellent ice-houses of straw; in fact, a great compact pile of ice will keep well, if placed where the drainage is good, and covered on all sides with straw, closely packed and made to shed rain.

Cold Pits and Frames—Cheap, Easily Made, and Useful.—These are very useful and convenient to protect cabbage plants, cauliflower, etc., in the kitchen garden, as well as where there is no green-house, to winter over roses, pansies, carnations, and other half hardy things from the flower garden. A cold frame is simply a hot-bed frame with its sash set over a dry spot facing the south and banked around with earth. In other words, it is a box of any convenient size or form, banked around with earth, and covered with a window sash, or better with a sash made so as to let water run off freely. Pansies, violets, candytuft, etc., set out in this may be had in flower nearly all winter. The plants should have air during the middle of every mild day, but in very cold weather the sash is not only to be kept closed, but covered with shutters. Early cab-

hages sown in September or October, are planted out in a cold frame when about two inches high and treated in the same manner.—A Pit is prepared by excavating the earth to a depth of from two to six feet, according to the size of the plants; a frame of stout plank is then built up within this. The pit should be of a width and length to accommodate several ordinary hot-bed sashes. The planking should be about a foot higher on the rear side than on the front, in order to give the sash the proper slope. The edges of the plank frame are to be beveled in order to make a close joint, and all the arrangements for supporting the sash the same as in an ordinary hot-bed. It will be found much cheaper in the end to make a permanent structure by walling up the pit with stone or brick, upon which a frame of joist to receive the sash is laid in mortar. The portion of the lining above ground, whether of plank, stone, or brick is to be nicely banked up with earth, and it is better to turf it to prevent washing. If the pit is not in a very dry sandy spot, provision must be made for drainage. The bottom of the pit may be covered with sawdust, tanbark, or even coal ashes, in which to immerse the pots. Roses, camellias, the more hardy fuchsias, cauliflowers in pots, and many other plants may be kept through the winter in a pit of this kind, observing the precautions regarding air, light and protection mentioned above. Mice are often troublesome and must be trapped or poisoned.

Dried Pumpkins and Squashes.

An old-fashioned but not a bad way to dry these fruits is to remove the rind, then cut them in cross-sections of about half an inch thick, forming rings, and suspend them in warm, dry places near the fire; or running a pole of suitable length through many of them, to place them in a moderately hot oven, after the bread is removed. The heat should be not enough to cook, but only to dry them.

The Crops over the Whole Country.

—Taking a general view of crops of grain, grass, roots, fruits, dairy products, and purely commercial crops, this year bids fair to prove one of great prosperity to the husbandman. There is no old corn at the West; the new crop, on the whole, large but backward in some sections. Sorghum promises a fine yield so far as we have intelligence. The tobacco crop is reported not quite so large as common. The amount of flax raised is large, and the stock of beans and peas much increased over former years. The potato crop has not been much affected by the rot, and there is a full supply. Other roots promise well. Frosts hold off generally up to the time we go to press. Eastern markets have never been better supplied with orchard fruits, especially peaches and plums. Winter apples, however, appear much earlier than common in market, in such numbers, that we may confidently expect there will be a scarcity before the close of winter.

New England Agricultural Society Fair.

Owing to several circumstances, we have been disappointed in not being able to personally visit many of the fairs. The more important have been very successful and well attended. The first fair of the New England Agricultural Society drew together, at Springfield, Mass., a great concourse of people, among them many of the best farmers of New England and other States. The show, on the whole, was fine; but the cattle men and real farmers were slighted, and crowded one side by the horse-show; trotting horses "won the money," and absorbed the interest of the crowd of spectators. Short-horns, Devons and Ayrshires were well represented, but the Alderneys made an inferior show. Swine, very meagre. There were, everywhere, fine representations from some of the best flocks of fine wool, and other sheep. We are entitled to say that such a body as the New England Agricultural Society should not by the offer of premiums, and by all other means, secure the presence of horses noted for speed, in order to attract a crowd and fill its treasury. The thing is foreign to the interests of the farmer—in fact our stock of horses has been deteriorated by this trotting business, to say nothing of the morals of our sons.

Constitution of a Farmers' Club.

ART. I. The name and title of this association shall be "The Schaghticoke Farmers' Club," (do not call it "Union Agricultural Society."), and its objects are to disseminate a knowledge of good farming among its members, to afford a means of distributing seeds, grafts, cuttings, and the like, to collect statistics of agricultural matters, to discuss all topics affecting the prosperity of its members as farmers, viz., markets, crops, agricultural laws, etc.

ART. II. All inhabitants of the village of Schaghticoke, or vicinity, may be members of the Club, by attending its meetings, but only those contributing \$1 or more

yearly, shall have a voice in using or disposing of the property or funds of the Club, directly or indirectly.

ART. III. The officers of the Club shall be a Chairman and Vice-Chairman, selected at each meeting for the next. A Secretary (who may also be the Treasurer,) shall be elected not oftener than at every fourth meeting, and shall serve till another is appointed. The Secretary shall in addition to the ordinary duties of such an officer, be the responsible business man of the Club, having charge of the funds or other property of the Club, and reporting regularly, at least annually or at the close of his term of office.

ART. IV. The Framers and Signers of this Constitution may by a two-thirds vote, add to their own number such persons as they may elect, and two-thirds of these if present at any meeting, may also by a two-thirds vote, alter or add to this Constitution, or frame by-laws, etc.

The American Pomological Society.

The Biennial Session of this Society commenced at Rochester, N. Y., Sept. 13. One of our Associates who is present, writes: "The attendance is quite large, there being delegates from nearly every loyal State. Doct. J. A. Warder, of Ohio, Vice-President, occupies the chair—the President, Col. Wilder, of Boston, being prevented from attending. He is re-elected President, with a large number of Vice-Presidents, and James Vick, Rochester, N. Y., Secretary. Among well-known pomologists present, we notice Warder, Bateham, Campbell, and Beeler, of Ohio; Edwards, and Muir, of Mo.; Knox, and Dreer, of Pa.; Sanders, of D. C.; Hovey, of Mass.; Downing, Carpenter, Field, Mead, and others, of Eastern N. Y., and many from Rochester, and Western N. Y. The discussions thus far have been mainly confined to grapes, and have shown an earnestness to get at facts, with little of the loose talk that too often characterizes such meetings. There is a good show of fruit, but it is mainly from the extensive Nurseries around Rochester. The display of grapes is interesting, as there are specimens of many sorts not generally cultivated. The grape show, as a whole, is inferior to that held at the Office of the American Agriculturist last year, and there were on the Tables at our Office, when I left, far better specimens of Delaware and Concord, than are shown here. My notes on the grapes and other fruits can not reach you in time for the October number." The next Biennial Meeting (1866) is appointed for St. Louis, Mo.

Agricultural Exhibitions in October.

New Brunswick. Fredericton, Oct. 4-7.

Maine. York Co., John Hanscom, Sec. at Saco and Biddeford, 11-13.

New Hampshire. Merrimac River Association, V. C. Gilman, Pres., Nashua, 5-6.

Vermont. Connecticut Valley, Bradford, 4-6.

Massachusetts. Bristol Co., Taunton, 4; Berkshire Co., Pittsfield, 4; Hampden Co., Springfield, 4; Barnstable Co., Barnstable, 4-5; Hampshire, Franklin and Hampden Cos., Northampton, 6; Worcester Co., South, Sturbridge, 6; Plymouth, L. Kelth, Sec., Bridgewater, 6-7; Hampden Co., East, Palmer, 11; Hampshire, Amherst, 13; Martha's Vineyard, West Tisbury, 18.

Rhode Island Horticultural Society Grape Show, C. F. Phillips, Committee, Providence; time?

Connecticut. Greenwoods, Winsted, 5-6; Middlesex, Middletown, 5-6.

New York. Chautauqua Co., Fredonia, 4-6; Lewis Co., Turin, 4-6; Otsego Co., H. H. Hooker, Sec., Cooperstown, 5-6; Queens Co., Jamaica, 5-6; Dryden, at Dryden, 5-7; S. Snyder, Sec., half proceeds to San. and Chris. Commissions; Wilson, Porter and Newfane, at Wilson, Niagara Co., 6-7; Orange Co., Goshen, 4-6; Westchester Co., White Plains, 11-12; Tompkins Co., Ithaca, 11-12; Brockport Union, Brockport, Oct. 19.

New Jersey. Burlington, Mount Holly, 4-5; Warren County, Belvidere, 4-7; Egg Harbor City, 6-7.

Pennsylvania. Luzerne Co., Wyoming, 5-7; Crawford Co., E. L. Litchfield, Sec., Conneautville, 5-7;

Susquehanna Co., Harford, 4-6; Indiana Co., Indiana, 4-6; Union Ag'l Ass'n, Burgettstown, Wash. Co., 6-7.

Ohio. Medina Co., Medina, 3-5; Butler Co., Hamilton, 4-7; Lorain Co., Elyria, 4-7; Mahoning Co., Youngstown, 4-7; Morrow Co., Mt. Gilead 5-7; Union Co., Marysville, 5-7; Muskingum Co., Zanesville, 6-9;

Fayette, Washington, 7-9; Richland, Mansfield, 7-9.

Indiana. Laporte Co., Laporte, 12-14.

Illinois. Stephenson Co., Freeport, 4-7; Washington Co., Nashville, 5-7; DeWitt Co., Clinton, 5-8; Vermilion, Catlin, 11-14; Morgan, Jacksonville, 12-14;

Henry Co., Cambridge, 4-7; J. Calvin Edwards, Sec.

Michigan. Kalamazoo Co., Frank Little, Sec., Kalamazoo 6-8; Clinton Co., 5, and Johns, 6-7;

Wisconsin. Vernon Co., Viroqua, Wm. S. Purdy, Secretary, 4-6; Iowa County, Dodgeville, 12-14.

Kansas. Bourbon County, at Fort Scott, 15-16.

Canada. North Ontario, E. D., Prince Albert, 11.

Exhibition Tables at the Office of the American Agriculturist.

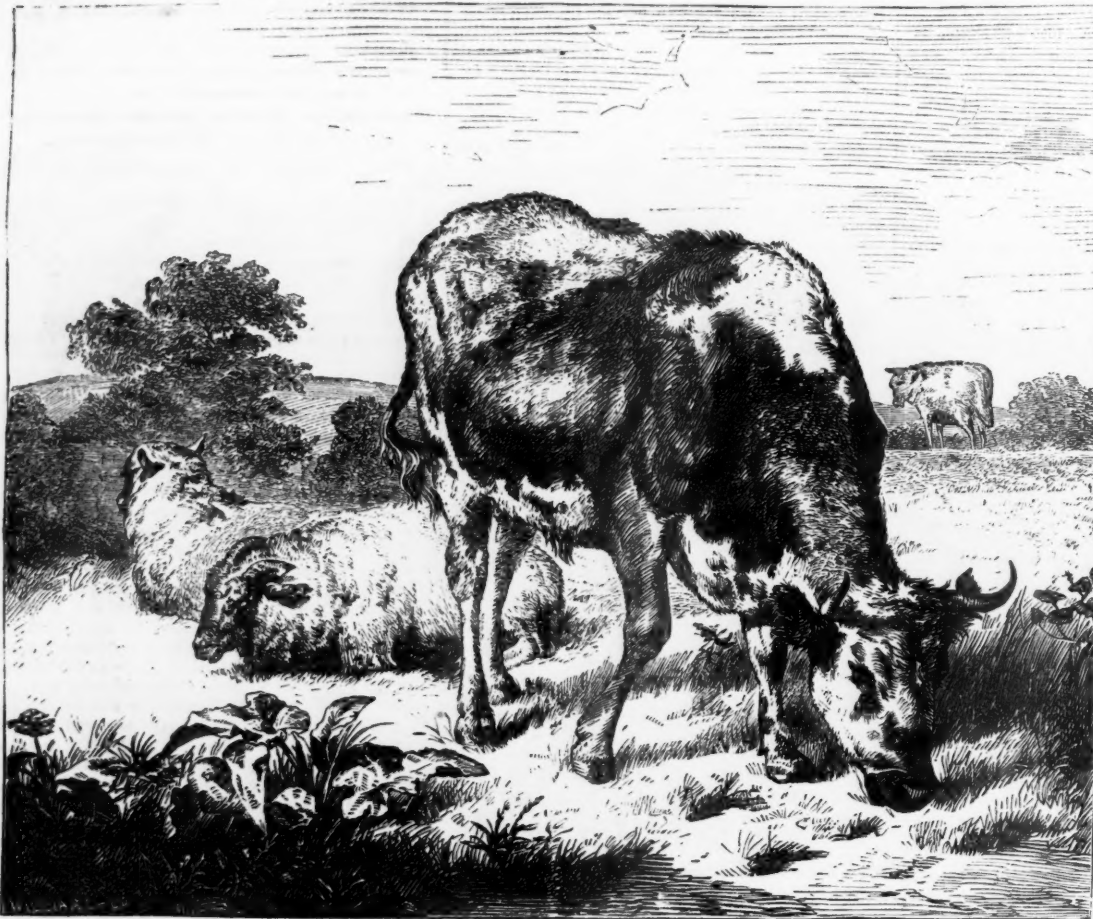
The following articles have been placed on our tables for exhibition since our last report:

FRUITS.—Apples: Siberian Crab: Mr. Kissam, Jersey City, N. J. ... Summer Harvest and Summer Queen; Dr. I. M. Ward, Newark, N. J. ... Suffolk Beauty; H. A. & E. L. Brown, Deer Park, L. I. ... Summer Porter; E. Williams, Mont Clair, N. J. ... Kelsey, Golden Pippin, Fall Pippin, Gravenstein, and Waxen; P. H. Ashton, Middletown, Conn. ... Maiden's Blush and Summer Pippin; E. F. Fowler, South East, N. Y. ... Fall Pippin, fine; Mr. Jackson, Sing Sing, N. Y. ... Pears: Duchess of Wurtemberg, Doyenne Boussock, Bartlett, William the Fourth, and White Doyenne; J. Van Brunt, Fort Hamilton, L. I. ... Ravenswood, original, and on Quince; C. F. Erhard, Ravenswood, N. Y. ... French Jargonelle and Osband's Summer; W. S. Carpenter, Rye, N. Y. ... Osband's Summer, J. Van Brunt, Fort Hamilton, N. Y. ... Grapes: Concord; William King, Perth Amboy, N. J. ... Logan and Hartford Prolific; Dr. Hollick, Staten Island, N. Y. ... Allen's Hybrid, and Iona; Dr. C. W. Grant, Peekskill, N. Y. ... Concord, and Delaware, fine; James Keeley, Paranus, N. J. ... Seedlings; F. W. Loudon, T. Briggs, Schaghticoke, N. Y.; Wm. Underhill, Charlton, N. Y. ... Hartford Prolific, and Concord; P. H. Ashton, Middletown, Conn. Delaware and Concord, finest; Van Wyck & Johnston; Fishkill, N. Y. ... Grape blossoms and small fruit, second growth; A. W. M. Hume, Manhattanville, N. Y. ... Other Fruits: Bolmar's Washington Plums; Samuel Cooper, Tompkinsville, N. Y. ... Cut-Leaved Blackberries, fine; John Cole, Tompkinsville, N. Y. ... Newington Nectarine tree, in pot, on stand and stock, in full bearing; Lewis Schmidt, gardener to James Brown, Clifton, N. Y. ... Figs, very fine; Henry Miller, East New York ... New Rochelle Blackberries; Geo. Warner, Bloomingdale, N. Y., John Cole, Tompkinsville, N. Y., and C. S. Pell, N. Y. Orphan Asylum. ... Wild Blackberries; W. R. Field, Mount Hope, N. Y. ... Crown Bob Gooseberries; John Hunter, Shark River, N. J.

FLOWERS.—Beautiful Bouquets of Grasses, Japan Lilies, Roses, Tuberoses, Balsams, etc. Miss M. A. Cortelyou, Westfield, N. Y., to whom our tables are indebted for many embellishments during the whole season. ... Japan Lilies, Carnations, Dahlias, and Tuberoses; C. S. Pell, N. Y. Orphan Asylum. ... French Asters, fine; G. Craft, N. Y. City ... Night-blooming Cereus, Lemon Verbena, and Rose Geraniums; Mr. Cummings, Westchester Co., N. Y. ... Gladioli, and Asters, fine collection; C. H. Lillenthal, Yonkers, N. Y. ... Double Balsams; W. W. Denslow, High Bridge, N. Y. ... Double Sunflowers; Mrs. W. B. Young, Middletown, N. J. ... Bilbergia Leopoldii in bloom; Dr. Peyton, South Bergen, N. J. ... Dahlias, fine show; C. S. Pell, N. Y. Orphan Asylum. ... Large Sunflower; E. Dutcher, Blaueville, N. Y. ... Orchids, Stanhopea oculata, and S. sacata, and splendid Double Zinnias; Isaac Buchanan, Astoria. ... Bouquet of Cut-flowers; E. C. Chateauf, Williams' Bridge, N. Y. ... Fine Seedling Phloxes; E. G. Burgess, Jersey City, N. J.

VEGETABLES, ETC.—Fine Buckeye Potatoes; James Holbrow, Walden, N. Y. ... Tomatoes; Louis A. Berte, Tremont, N. Y., John Cole, Tompkinsville, N. Y., Deaf and Dumb Institute, New-York City, and G. M. Usher, Port Richmond, N. Y. ... Teasels, fine; W. J. Townsend, Skaneateles, N. Y. ... Northern Iowa Corn, from Wineshiek Co., Iowa. ... Early Potatoes; Wm. Cox, West Hoboken, N. Y. ... Red and Yellow Onions; D. C. Ryder Sing Sing, N. Y. ... Prairie Seedling Potato; W. S. Carpenter, Rye, N. Y. ... Chinese Sugar Cane; P. H. Ashton, Middletown, Conn. ... Blue Stem Wheat, very fine, 34 inches high; David Young, Oyster Bay, N. Y. ... Chess (*Bromus Secalinus*); Wm. Lalor, Geneva, N. Y. ... Canadian Winter Barley, 56 heads, 1,500 kernels, from one seed; W. H. Lester, Dobbs Ferry, N. Y. ... Winter Wheat from California Seed; James Thompson, Basking Ridge, N. J. ... Potatoes, Early Cottage, Shaw, Samaritan, Buckeye and Algiers; W. S. Carpenter, Rye, N. Y. ... Large Purple Egg Plant; W. P. Robinson, English Neighborhood, N. J. ... Fesee Tomatoes; Mr. Sussdorf, Woodside, N. Y.

MISCELLANEOUS.—Rebel Shell and Solid Shot which struck near Mr. O. Judd, before Petersburg, Va. ... Tomato Worms covered with cocoons of Ichneumon fly; Nest of young Robins, one perfectly white; C. S. Haley, Newmarket, N. J. ... Tarantula Spider, very large, from St. Domingo, W. I.; T. H. O'Donoghue New-York City. ... Hen's Egg, 3½ oz.; George F. Gantz, Tubby Hook, N. Y. ... Bantam Hen's Egg; John A. Scott, Mt. Vernon, N. Y. ... Shark's teeth, etc., found in a marl pit, 30 feet below the surface; John Hunter, Shark River, N. J.



AT PASTURE. — Engraved for the American Agriculturist.

Fall Feed for Cows.

It's of no use to think of keeping up the quantity and quality of our butter, if we neglect the fall feeding of our cows. When the grass has been bitten by the frost several times, it loses its sweetness and its substance. There may be enough in bulk, but the animals do not like it as well, and it does not make as much milk or fatness. The pasture feed must be gradually supplemented by fodder. And we can well afford to go to the trouble and expense of it, for butter sells at very remunerative prices. Corn stalks not yet dry will generally be eaten up clean, and a few thrown out morning and night are not only relished, but have a direct and marked effect on the milk product. Sweet apples especially, fed in reasonable quantities, are good; but do not let the cows have the run of the orchard. Pumpkins are first-rate, a few at a time, twice a day, with all the seeds removed. Cabbage leaves, beet and turnip and carrot tops, and such like garden refuse, are excellent. A little dry hay may also be given to advantage, feeding out only what will be eaten up clean. A few pints of bran or corn meal, or a few ears of soft corn, or some oil meal may be fed daily. Yet the change from simple pasturage to this extra feed should be made gradually. All acknowledge the importance of this carefulness in spring, when passing from dry feed to grass. There should be similar care exercised in the fall, or the yield of milk will fall off. Cows or sheep that are in good flesh, not to say fat, at the beginning of cold weather are half wintered. Just now it is that feed tells best. The fresh bracing air gives an appetite; the annoyance of heat and flies does not wear off the flesh; animals can feed all day and sleep all

night, and the weather is not cold enough to make it necessary to consume much of the food or of the fat, to keep up the animal heat.

Veterinary Physicians and Surgeons.

The almost utter lack of reliable veterinary practice in this country is a matter of the weightiest concern. We are in the constant receipt of letters describing disease and death among animals, to which, of course, we can not reply satisfactorily. Now and then one forms the subject for a basket item, but it is a very wrong thing in general to attempt to prescribe or give particular advice for either live stock or mankind, depending upon descriptions of the disease received by letter and not from professional men. Every other civilized country in the world has its veterinary schools, encouraged or supported by Government. Many Governments give the graduates of these institutions employment with permanent situations, locating them in different parts of the State, so that at a moderate rate anybody may consult them. In this country we have here and there a few second rate veterinarians, and a very few who may be considered really scientific men. Horse and cow doctors, such as they are, abound: they bleed, bore horns, dock horses' tails, blister and physic all the animals they can get placed in their charge. Most of them have been graduated as jockeys or stable boys in the city, or as blacksmith's clerks in the country. It is an art with them to get horses to "doctor." They involve the simplest ailments in mystery, and a horse once in their hands is kept sick and at charges as long as possible.

We ought not to be content to suffer this condition of things. The owners of fine stock in

the country, the officers of our agricultural, and stock-breeding societies ought to bestir themselves. The State boards of agriculture should be stirred up by way of remembrance, to act. Legislative aid should be obtained, to send young men abroad to become well educated veterinary physicians. They would have large practice just as soon as the people could be convinced that their knowledge was founded upon real science and not quackery—and we might soon be able to have veterinary schools and hospitals connected with the agricultural colleges now likely to be soon established in almost every State. At least a professorship of veterinary medicine and surgery ought to be required by the act of incorporation of these institutions. Already the tendency to turn the farmers off with a professorship or two in connection with an institution devoted to commercial and industrial education, is to be observed among those interested in the agricultural college grants. We ought to talk up this matter, to read up upon it, to discuss it at every Farmers' Club, at the meetings of the agricultural societies, at Legislative farmers' meetings, and wherever farmers get together. Incite promising young doctors to turn their studies in this direction where the way is open, rather than have to elbow their way through life in the crowded ranks of the regular medical profession. Good results will surely come of any movement honestly made for the promotion of sound veterinary knowledge and practice.

Digging and Sweating Potatoes, etc.

This season has been of a character to make many small potatoes, and these have a value for making pork not to be regarded. We have never tried letting the potatoes sweat, but possibly this would save both the potatoes and the labor. When potatoes are dug, do not neglect putting them in heaps to sweat. The heaps should each contain about a cartload of merchantable potatoes; they should be covered with tops and left three days to a week, then sorted over and barreled, or put in on a bright dry day. When barreled, abundant ventilation is requisite, two 2-inch augur holes in every third stave and four in each head will answer.

SAVING SEED.—While the vines are thrifty, examine them; if any doubtful plant is found, dig every potato in the hill. Finally, dig them yourself and keep a basket for the product of any hill in which there is a suspicious looking tuber. Potatoes do not mix in the hill, but now and then a seedling or a tuber left in the ground, makes a mixture even in carefully planted lots.

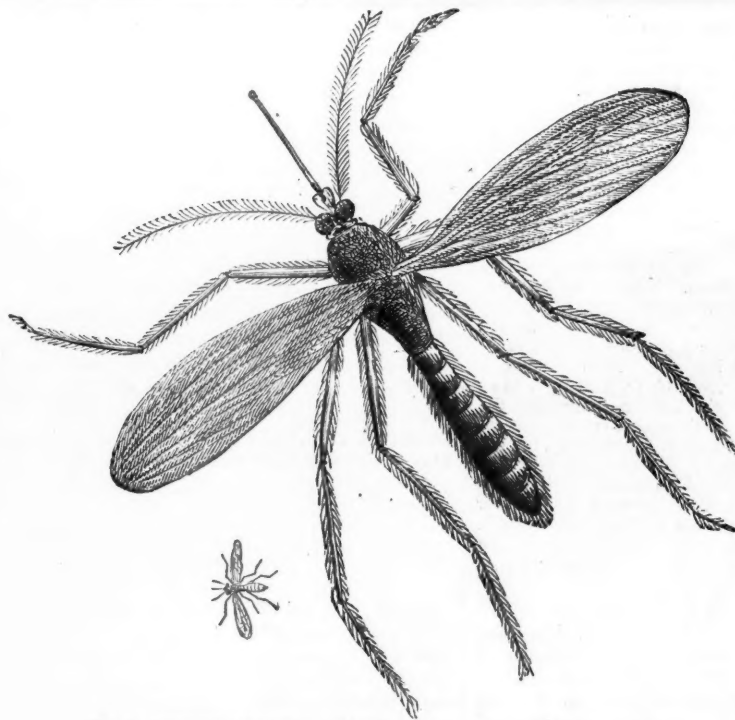


Fig. 1.—FEMALE MOSQUITO.—NATURAL SIZE, AND GREATLY MAGNIFIED.

The Life of the Mosquito.

Some one once wrote a book, called "The Miseries of Human Life," professing (or intending) to record and discuss every possible discomfort, from a cold breakfast to a missing shirt button. The book was incomplete, however, as it lacked a chapter on the mosquito. The omission may be accounted for by the fact that the writer lived in old England, and not hereabouts—the very paradise of mosquitoes. The reader has probably many a time this summer exercised a little strategy with the mosquito, and when it was fairly settled, made a dexterous flank movement, come down with a slap, and exclaimed, "I got him this time." You were all wrong, you did not get *him* at all, but you probably succeeded in crushing *her*. One of the Turkish Sultans believed that a female was at the bottom of all mischief, and when any disturbance took place in his dominions his first question was "who was she?" "The old brute," you will say; well he was a brute, and the only excuse we can make for him is to suppose that having a taste for entomology, he had been studying mosquitoes, and finding that the females alone did the mischief, applied his knowledge to human affairs.—Did it ever occur to you, when by a well directed slap you demolish a mosquito, that you destroy a very beautiful, and in spite of its blood-thirsty propensities, interesting object? By the aid of some magnified figures we can show that this is the case. In the first place, let us dispose of the male insect, fig. 2, which is readily distinguished by his plumes. He has the negative quality of not annoying us, lives but a short time, and what little food he requires he gets from flowers.—Fig. 1 shows the female, more magnified, and armed with her formidable proboscis. To understand her history we must go



Fig. 2.—MALE MOSQUITO.

back to the egg. The female lays her eggs upon the water; finding a suitable place she supports herself by her two pairs of fore legs, and crossing the hinder pair like a letter X, she deposits the eggs one after another, in this support made by the legs, putting them endwise, side by side, and sticking them firmly together by means of a glutinous secretion which covers them. When the mass is complete, it is of the shape of a little boat, fig. 3, consisting of from 250 to 350 eggs, which is set afloat and abandoned to its

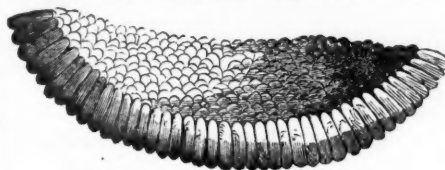


Fig. 3.—BOAT OF MOSQUITO EGGS.

fate. This little raft floats persistently, it will not sink, nor will hard usage break it up, nor freezing destroy the vitality of the eggs. In a few days the larvæ, as the first stage of the insects is called, are hatched, make their way out of the under side of the egg, and go off in search of food. Fig. 4, is the full grown larva, much magnified, with one of the natural size at the left hand. They may be seen in any vessel of rain water that has been exposed for some days during summer; from their peculiar manner of locomotion they are called "wrigglers." The projection, A, near the tail, is a tube of hairs through which the wriggler breathes. When not disturbed it rests with its head downward, and with this tube at the surface of the water, but on the approach of danger it rapidly wriggles itself to the bottom of the vessel. After wriggling through 8 to 15 of the first days of its existence, and casting its skin two or three times, the mosquito goes into the pupa state, fig. 5. In this condition it swims with its head upward and though not so lively as before, it moves and tumbles about by means of some paddles at the end of its tail. While in the pupa state it takes no food, and its breathing arrangements are quite reversed, for instead of respiring through the tube at the end of its tail, it is furnished with two tubes at the head, through which it takes in air. This state of things lasts from 5 to 10 days, when the skin bursts and the perfect insect comes forth. This is a most critical period in the life of these insects, and they only can emerge with safety on a very still, sunny day. The skin of the pupa bursts open on the back and the insect first protrudes its head, then its chest gradually follows, and it stands erect in the shell with its legs still confined, and its wings limp and damp. The

slightest breeze at this time would upset the frail boat, and the insect would be drowned. But a very small proportion of the whole succeed in passing this last transformation in safety. Soon the front pair of legs are extricated, and placed upon the water, as shown in fig. 6. This enables the insect to steady itself, and much diminishes the danger of upsetting. The sun speedily dries the wings, which are gradually expanded; then the other legs are drawn out and placed on the edge of the pupa case, the antennæ and proboscis are elevated and the insect is able to quit its watery abode and fly off to serenade us with its shrill note, and to relieve us of our surplus blood. Naturalists are not agreed as to the manner in which the mosquito produces its peculiar and annoying sound; it is thought by some that the wings alone do not cause it, but that they are aided by the rapid vibrations of the muscles of the chest. It is said that the wings vibrate 50 times in a second. If the cause of the song of the mosquito is not well understood, such is not the case with its other annoying peculiarity—its sting. Here the object is so small that the microscope must be called to our aid. When examined by the glass, the sting of the mosquito is found to be a very beautiful as well as complex instrument. Some dissections of the apparatus are given in fig. 7. A, shows the sting as it appears in its sheath when entire; B, shows the same with a part of the sheath removed. The parts of the sucker, with its lancet-shaped blades, are shown at C. The wonderful fineness of these points is seen in the ease with which they penetrate our thick, tough skin. The sting itself would cause us

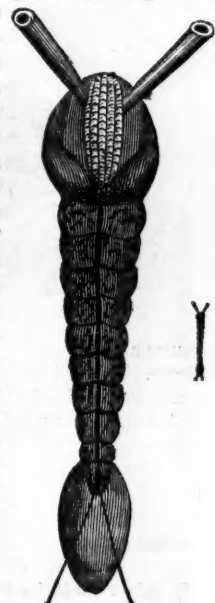


Fig. 5.—PUPA.

but little annoyance, were it not that the proboscis gives off an irritating secretion which inflames the slight wound, and in some persons

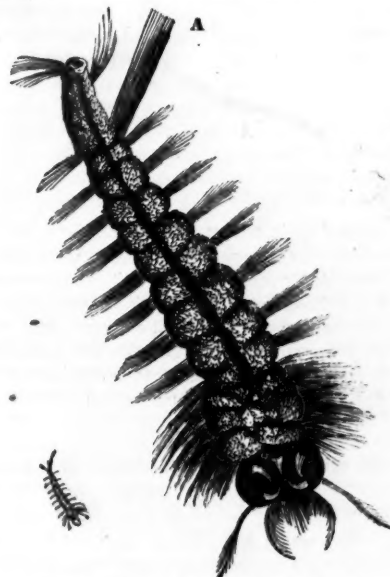


Fig. 4.—LARVA OF THE MOSQUITO.

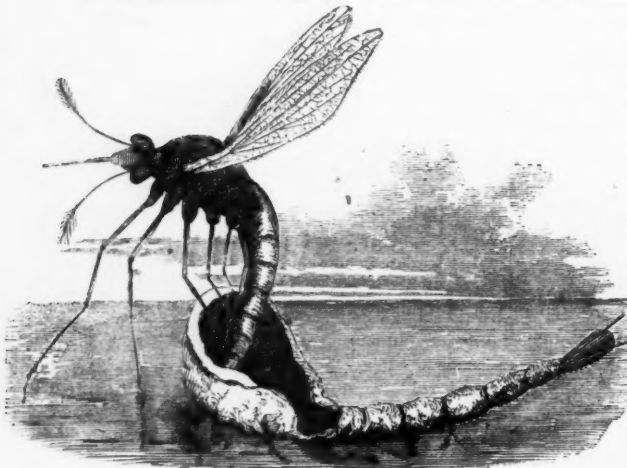


Fig. 6.—PERFECT INSECT EMERGING.

causes a painful swelling and even troublesome ulcers. This is intended to give an idea of the structure and habits of mosquitoes in general, and not of any particular species. Our mosquitoes belong to the genera *Megarhinus*, and *Culex*, but they do not seem to have been thoroughly studied, and there is much confusion among naturalists concerning them. It is somewhat consoling to know that but a small proportion of the wigglers ever reach the perfect state. Myriads are lost in the process of liberating themselves from the pupa case. The stillness of the air, or otherwise, at this particular season in the life of the musquito, explains why the insects are so much more abundant in some

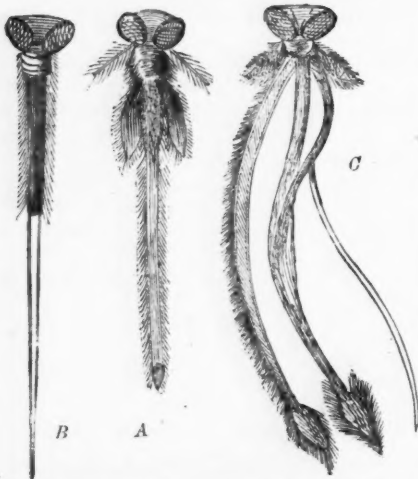


Fig. 7.—STINGS AND SUCKERS OF MOSQUITOES.

years than in others. Great numbers are devoured by Dragon-flies, which at the South are called "mosquito hawks." We have seen mosquitoes so plenty near New Orleans, as to darken the wall of a building upon which they were resting during the day time, while great numbers of these mosquito hawks were flitting about and devouring them by thousands.

About Charcoal as a Deodorizer and an Ingredient of Manure.

The errors of reading and thinking men sometimes indicate subjects which it is profitable to discuss for the better information of the public. The subscriber sending the following will therefore, we hope, excuse the use made of it.

"Wherever the refuse of coal pits or bins can be bought, few things are more useful to the gardener. Charcoal acts as an absorbent of the

gases from decaying animal and vegetable matter, and the product when applied to growing crops become a powerful fertilizer. From the fact that charcoal dust rubbed over tainted flesh and allowed to remain on it a few hours will remove all unpleasant smell and taste, it has sometimes been inferred that it acts as a preservative from decay. This is a mistake. It takes up the noxious gases, and holds them in its cells, but does not arrest decomposition. The bodies of two dead dogs were placed in a wooden box, and covered several inches thick with powdered charcoal, and the box left open. No effluvia was ever perceptible; yet at the end of six months little remained but the bones. This shows that charcoal absorbed the gases of decay, but did not stop it. These odors, offensive and hurtful to mankind, it stores away and holds until wanted for use in promoting vegetable growth.

Obviously, then, we should use charcoal dust about our privies, sinks, drains, stables, or wherever there is any decomposition going on."

Wrong! The facts are true, the main ones,—the deductions, obvious perhaps, but false. Charcoal is one of the most porous substances. The wood from which it was made consisted of oxygen, hydrogen and carbon; the burning drove off the oxygen and hydrogen, and left the carbon. The plant cells of which the wood was formed are by the burning all opened, and each minute cell has an outside and inside surface, the form of which is perfectly retained in the coal. This shows that an almost inconceivable extent of surface is exposed. Much as if in a bushel of turnip seed the insides were all out, leaving nothing but the shell-like skins. The minute plant cells making up the wood, consisted of innumerable particles, each containing 12 atoms of carbon, 10 of hydrogen and 10 of oxygen. And although these compound atoms of cell-substance are so small that the most powerful microscopes can not show them, yet we know that each consists of the atoms, and in the proportions named. When, therefore, all but the carbon is driven off by heat, most of the carbon, which the heat can not fuse, remains filling the space which it originally occupied in connection with the other elements, as an exceedingly porous mass, infinitely increasing the surface exposed to the action of gases.

Charcoal has, in common with many other substances in a state of very minute subdivision, the property of condensing upon its surface various gases, some more than others. Thus, when a piece of charcoal freshly heated is placed in a jar of oxygen gas, it will absorb many times its own bulk, the gas not filling the coal as water fills a sponge, but being condensed upon the surface, as the moisture in a room is condensed on the window panes in winter. The most wonderful fact about this condensation of gases in such materials is, that after all the oxygen or other gas, possible, has been taken up, the coal or porous body is capable of absorbing still other gases to a great extent. Fresh charcoal will absorb 80 to 100 times its own bulk of ammonia, but it will part with all, or nearly all, in presence of water, or moist air.

When different gases capable of combining mingle in the air, if they combine at all, they often do so very slowly, but when they come together condensed in the pores of the charcoal, chemical union very easily takes place. So it is, that when the products of the decomposition of animal substances, etc., being in the gaseous form, are absorbed by charcoal, the oxygen of the air being absorbed at the same time, the

oxygen at once combines with them and burns them up, just as if they burned in a flame.

In the case mentioned by our correspondent, the air and warmth caused the dogs to decompose; the charcoal absorbed the gases and caused them to unite with oxygen, so that carbonic-acid gas, water, and ammonia were the principal results. These, for the most part, were not retained by the coal, (though some of the ammonia was,) but they escaped into the air. Under such circumstances the smell of ammonia may be perceived, but is not very observable. When charcoal dust is mixed with decomposing substances, the facts that concern us, are, 1st, that it prevents bad smells; 2d, that it absorbs a portion of ammonia, (i. e. carbonate of ammonia); 3d, that it thus becomes of fertilizing value; 4th, that when employed in moderate quantities, it will soon take up all the ammonia it is capable of retaining and the rest will escape, and thus considerable losses may occur; 5th, that the quantity of ammonia taken up and retained is very variable, and may be very little; 6th, the presence of charcoal causes a much more rapid decomposition than would otherwise occur, for it brings a large supply of oxygen, which it condenses from the air, almost in immediate contact with the decomposing matter. This is the secret of its purifying tainted meat, for the action of this oxygen, influenced perhaps by the presence of the charcoal, is to cause the thorough consumption or burning up (the oxidation) of all those particles of the outside of the meat which have become tainted.

It is clear then, that charcoal dust ought not to be mixed with manure, in the hog-pen, in the privy, or anywhere; that animal matter ought not to be composted with charcoal, even if a very large quantity be used. If the substance be mixed first with charcoal, and then covered with soil or muck, little loss will take place and the coal will be a real benefit.—Mechanically and chemically charcoal is often of great benefit to the soil. As a stomachic and corrective it is excellent to mix with the food of animals, hogs especially, if needed medicinally.



Ice-Houses—Drainage and Ventilation.

Many inquiries are proposed to the *Agriculturist* in regard to ice-houses. Where to put them? How to drain them? How and why to ventilate them, etc. One subscriber "can't make his ice keep after July or August." Another building his house altogether above ground, allows a circulation of air among the rails on which the ice is laid, and wonders why it does not keep better. Now, ice-houses are quite as good entirely above ground as below, and on some accounts we think better. Good walls of wood filled in with sawdust are much better non-conductors of heat than stones, even though a board lining, packed well with sawdust between it and the stone wall, be provided. The

cost of excavation and walling up yields no corresponding benefit. The ice-house ought to stand in the shade of trees, and, if possible, on a north slope, with end toward the hill.

We give a sketch (fig. 1.) of an ice-house seen from the up-hill side. Fig. 2 is the ground plan showing how to construct cheaply and durably as small an ice-house as any one ought to build. The size of the chamber is 10 by 10. The walls are one foot thick, the studs being 2-inch plank, 10 inches wide, spiked upon the sills (as seen in fig. 3, which is a perpendicular section.) The sills are 4 by 10 timber, and corner posts 4 by 4 inch joists. The inside boarding is 2-inch hemlock plank, the outside fair 1 in. pine, both nailed directly upon the studs; and the 10-inch space between is filled with sawdust, tan bark, or some similar substance. Upon the top of the side walls, 6 by 2 inch plates are laid and spiked to the studs. On these the rafters 2x5, or 2x6

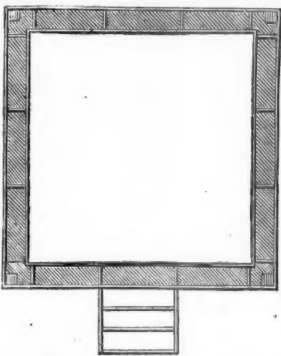


Fig. 2.—GROUND PLAN.

rest, overhanging 3 or 4 feet. The boarding-in of so small a house, is sufficient "tiding," but in a larger one it would be best to put a piece across from one plate to the other in the middle. The inner boarding should meet the sheathing on the underside of the rafters, and it is an advantage to stuff the space between the sheathing and the roof with straw, shavings, or swale hay. In the ends there should be ventilators, 1 foot square, with sliding shutters on the outside as represented in fig. 1.

The sills rest upon a foundation of stone or brick, laid in mortar or cement—best cemented,

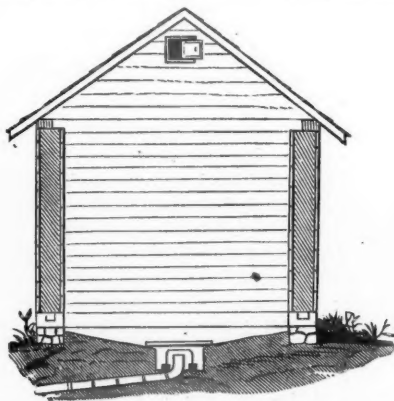


Fig. 3.—PERPENDICULAR SECTION.

at least on the inside. The floor of the house we prefer to have cemented, sloping gradually to the center, where a box is sunk, up through which the drain, a round tile, rises about 5 inches. The box is well cemented and watertight. Three pieces of brick laid in the bottom of the box will support an inverted crock as shown in fig. 3. This ought not to come quite up to the level of the floor. The object of this contrivance is, to prevent a flow of air back through the drain, and to keep the end of the drain always free. A flooring of planks having 1/2 inch spaces between them, is laid upon sleepers, rails or studs, over the cement bottom, and this is covered with a thick layer of straw. Sawdust, planing-mill shavings, or straw, may be

used to fill in between the ice and the walls, and to cover the ice, but the straw layer should cover the floor to keep the sawdust out of the drain.

Around the outside the earth should be banked up to cover the foundation. In the end most convenient for filling and taking out, which is usually on the up-hill side, a door 3 feet by 5 should be provided, the door sill being 4 1/2 or 5 feet from the ground with outside steps.

The cost of a house like this, near New York, at present prices of lumber and labor, would be nearly or quite \$150, but when a farmer can give his own labor and that of his boys and regular hands at odd times, to getting out the stuff, preparing the foundation, etc., the cost of the materials would be almost the only outlay. Were we to build, we certainly would advise making the house 12 by 12 inside, and consequently 14 by 14 outside. A large mass of ice keeps with much less proportionate loss than a small one, and the addition of two feet to the dimensions of a solid block ten feet square by eight feet high, adds 640 cubic feet to the mass, which being on the outside must melt before the original block is touched at all. With an ice-house like this, if it be filled with tolerably firm ice, well packed, there is no trouble about melting. Access of air against the bottom or sides of the mass will cause it rapidly to waste, and contact of water with the ice by stoppage of the drain, will occasion most rapid disappearance. In time of freshets, large ice-houses set near the river banks, are often touched by the rising waters, and a few hours is sufficient to destroy thousands of tons. Very large ice-houses, for supplying villages or cities with ice, are built with much less care than is necessary with small ones. Double walls filled with tan or sawdust, a strong floor, surface drainage under the floor, and banking up around the outside of the building to prevent a circulation of air underneath, and a simple roof, are about all that is necessary. The size of such ice-houses is about 30 by 60 feet, and in case more room is wanted, another similar building is added on either or both sides, provision being made for safely carrying off the water from the roofs. The ice crop of the United States the last winter was the most valuable ever taken, and fortunes have been made by those so situated that they could readily house good ice, and ship it to the markets on the seaboard.

THE LUMBER AND LABOR for a house 10 by 10 inside, with 1 ft. walls costs about as follows in this vicinity.

16 Plank, for studs, 2x10, 8 ft. long.....	\$7.30
4 Sills, 4x10, 10 ft. long.....	3.00
5 Joists (for floor), 3x8, 10 ft. long.....	1.50
4 Joists (for corners), 4x4, 10 ft. long.....	1.00
14 Rafters, 2x6, 10 ft. long.....	4.20
350 ft. Hemlock plank, 2 in. thick.....	19.50
120 ft. floor plank, 2 in. thick.....	7.20
500 ft. pine matched boards.....	25.00
350 ft. roof boards.....	10.50
Nails and spikes.....	5.00
Shingles or other roofing, doors, etc.....	35.00
Labor.....	25.00
Total cost of the upright structure.....	\$144.20

This does not include the preparation of a foundation, draining, etc., which vary with the location and soil.

How to Use Leather Scraps.

They make an excellent road. For footpaths and sidewalks about the village, nothing can be superior, for after they are well trodden down and have been rained on a few times they make a soft, dry, elastic walk, free from dust and mud. Then, too, they make excellent fuel, provided there is a strong draft in the chimney, and the neighbors do not mind the stench of burning animal matter. These are common ways of disposing of this article, and all must admit its value. As fuel its worth is estimated

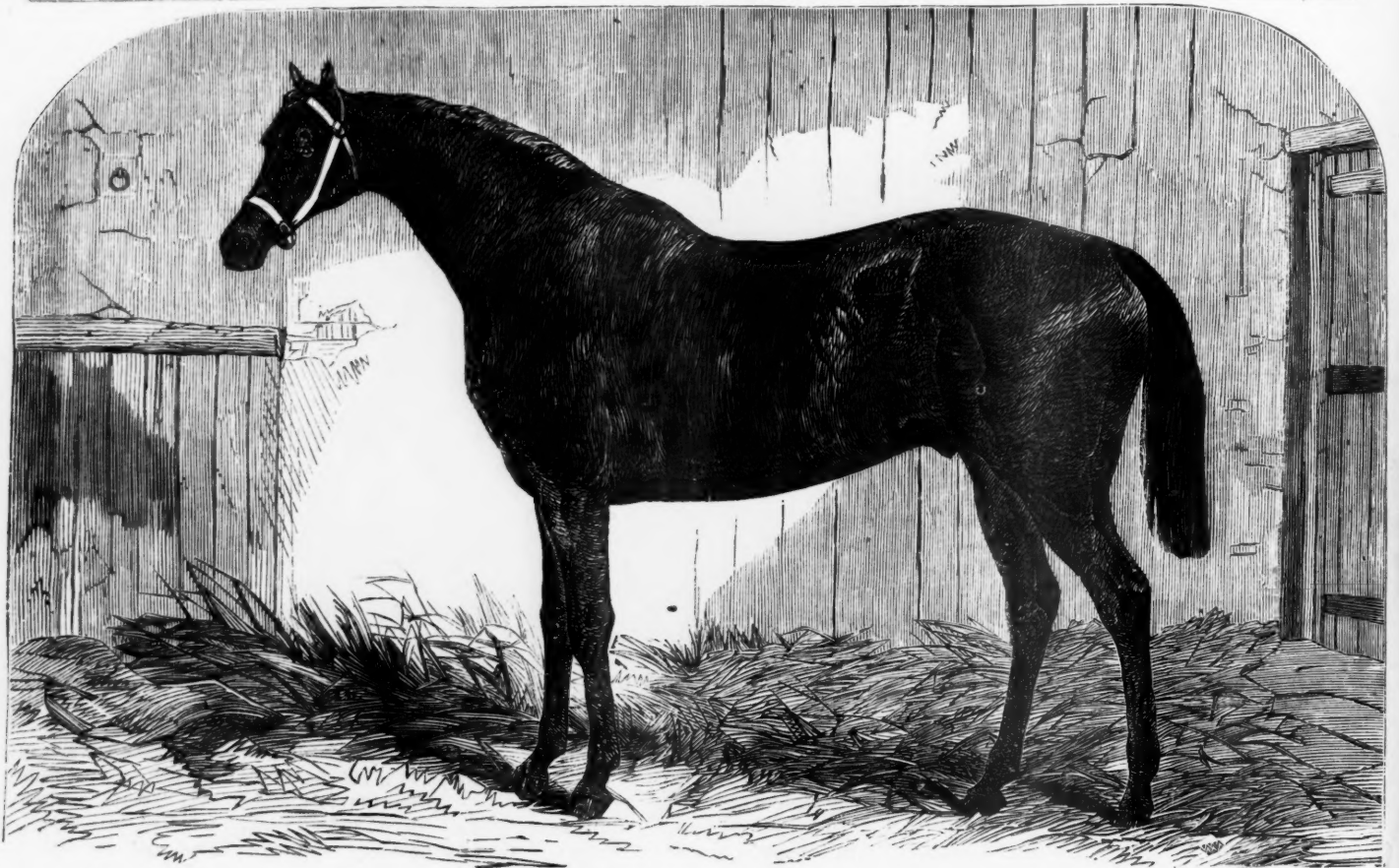
by some shoemakers and leatherworkers as nearly or quite equal to anthracite coal, ton for ton. Now, at the lowest estimate, leather is worth for manure more than \$30 per ton—\$50 would probably be nearer the truth—the only trouble being that it decomposes very slowly. Dry skins before they are tanned contain about 18 per cent of nitrogen, which, if it could be made available to the plants in the form of ammonia (which is not difficult), would make the value of raw hide scraps about \$60 per ton, estimating ammonia at only 16 1/2 cts. per pound. In the process of tanning many changes take place in the hide. Some lime becomes incorporated with it, and a large amount of tannin is absorbed. These changes are so various in different kinds of leather, that it is impossible without chemical analysis to state the amount of nitrogen in any particular kind, and we have no analyses that give the average, but may safely estimate it at from 11 to 14 per cent.

The question now comes with force, how to make it available, and on this point we make some extracts from the Genesee Farmer. The editor writes: "The largest crop of potatoes we ever saw raised was upon land which had received a liberal dressing of old well rotted manure belonging to a saddler who kept a horse and cow, and who was in the habit of throwing all his old scraps of leather on the manure heap", and proceeds to quote from a correspondent of a Philadelphia paper, who says, that he offered the boys in his town twenty-five cents a cwt. for all the old shoes they could collect. "He procured in this way several hundred pounds, roasted them in an oven heated to double the heat required to bake bread, and they became sufficiently brittle to be readily ground in a bone mill. The leather dust was put on potatoes in the row, along side of bone-dust, and the difference was in favor of the leather manure, it being much finer, and consequently having more immediate effect; the usefulness of bones, however, was also distinctly seen from a distance. On each side a liberal supply of barnyard manure was used; but the difference was very plainly shown in favor of the former two fertilizers. The ground was put in with wheat after the potato crop was taken up, and now no difference can be seen between the leather and bone manure; but a very marked difference, at a distance, where those fertilizers and the barnyard manure were applied—the former leaving a dark green streak through the field with tall and well-stocked grain. It is quite a contrast. Although the wheat on the whole field is good, yet the part where the leather and bone fertilizers were applied, is so much superior as to institute inquiries by strangers passing along."

Make the Barns Comfortable.

When lumber and labor are so scarce and so high, few will think of building new barns, but they should try to make the old ones comfortable. And this especially on the approach of winter. If the siding is poor, board it up on the inside of the studs, and fill up the space between with swale hay, straw, or shavings. If the underpinning is loose, chink it up before frost. If the floors of the stalls are rotten or worn thin, repair them or pull them up and lay dirt floors before the stock break through and break their legs. Any handy farmer can profitably attend to such jobs on rainy days, with small expense except for boards and nails.

A smile is to beauty, what dew is to the rose.



"RURAL DEAN"—AN ENGLISH HUNTER.—Engraved for the American Agriculturist.

Hints on Horses and Horse-Shows.

We are at this season in the midst of horse shows and trotting matches held under the auspices of agricultural and other societies and associations. It is considered nowadays indispensable to the fair judgment of the qualities of a horse, and especially of horses competing for a prize as breeding animals, that they should run a race or trot a mile or three miles together. The result too often is that the fastest horse, and not the best horse, gets the prize. The ability to trot fast is to a moderate extent natural, but so much depends upon training that it is oftener the trainer than the horse to whom the prize rightfully belongs. The fast natural gait of all horses is the run, and though the extreme flexibility of the entire system, and that ability to apply *all* the strength to running is acquired only by practice, yet it takes nothing like the skill to train horses for the race, that it does for the trotting match. So that after all, the powers of the horse are better tested by running than by trotting. Natural pacers we have, but natural trotters are hard to find, probably do not exist. Horses trot only when they do not want to go very fast, and even pacers when urged to higher speed, will break into a gallop or run. We therefore object to making trotting a prime test in judging of a horse's parts and qualities as a sire or dam. Why do agricultural societies continue to give premiums to geldings, except as they exhibit the good qualities of their progenitors? Old breeding horses ought, we think, always if practicable, to be exhibited with several of their descendants, whose performances may well be counted to their credit. The selection of horses as sires, simply, or mainly on account of their trotting powers, tends to deteriorate the stock. Thorough-bred or "hot

blooded" horses will trot, and may be trained to excel in trotting, but there is nothing which so thoroughly puts the quality of horse-flesh to the test, as English fox hunting, if the riders be expert and careful. We give above the portrait of one of the best horses in England, not a thorough-bred, but very well bred—"Rural Dean," out of Valentine, a valuable hunting mare, by the thorough-bred King of Oude, "one of Mr. Rarey's Alhambra savages." This is a dark brown horse, standing 16 hands and half-an-inch high; he received the 1st prize in the class of Hunters at the Islington Horse Show, last June, and, as a newspaper reporter says: "last April, with the well-known hard-rider Jack Webster on his back, he gave a still more practical proof of his quality by beating a field of eleven at the Brigstoke Steeple-chase, almost in a walk. His rider accompanied him to Islington, and distinguished himself highly not only by the style he brought him out around the ring, but by putting him over the hurdles," to exhibit his ability to leap fences and ditches.

In the language of horsemen, common horses are called "cold blooded," and the thorough-breds "hot blooded," doubtless because the latter are derived from the "blood of the Desert," that is, from the Arabian, Turkish, and Barbary horses, which there is good reason to suppose are the primogenitors of the entire race. The structure of the eye of the horse, and its peculiar adaptability to life on the desert, is one thing that leads to this belief. While size in connection with other good qualities is so very important in determining the value of a horse, it is surprising that breeding mares and stallions both of inferior size are so often chosen simply for the sake of securing, as is supposed, trotting qualities. The encouragement of thorough-breds is imperatively demanded, for by the use

of these with large framed, well developed mares, we may expect to produce after a few generations, upon our soil, horses like the above, large, powerful, fleet, and of great endurance. The great value placed by breeders of trotting stock, upon the blood of Hambletonian, Abdalla, Messenger, Mambrino, or other horses of their character, even when it is exceedingly diluted, indicates the direction of improvement.

Country Houses—Useful Hints.

A great deal has been written about country-life and the influence of rural scenes; do we think enough about the influence of our country dwellings? Much has been said and done of late years, to improve our domestic architecture; but have all the changes been improvements? All honor to the labors of Downing, Vaux, and others, yet we think an evil has mixed itself with the good which they aimed at. The desire to have a new-fashioned house often leads away from simplicity and true home comfort. A stylish house involves stylish furniture, stylish dress and equipage, and stylish ways of living throughout. Does not all this increase one's household cares, involve large expenditures for mere display, and so mar if not destroy domestic comfort and simplicity?

A dwelling house should be built chiefly for utility and convenience. If its outside look suggests comfort, it will surely please the spectator, even though it have no verge-boards, finials, diamond windows, balconies, and other such trimmings. The greatest beauty of a country house is its *expression of repose*. There is a certain moral attractiveness in it; it is, like the beauty of a placid, benevolent countenance. But an ornate house suggests the idea of *effort*; effort to attract attention, effort to keep the es-

tablishment in order and repair, effort to conform one's manners, dress and style of living to the showy residence. A plain house comports well with plain, quiet, unaffected, gentle (not "genteel") habits of life and manners.—("Genteel" is the *sham* of true gentility.) Too many build houses less for personal comfort than for mere ostentation. Being governed by fashion, they wish to show wealth, or superior artistic taste, not their own, or something else no more creditable.—In saying these things, we do not mean to object to the embellishment of home, far from it, but simply to indicate that this should be a secondary matter and for ourselves and not for mere show. First of all then, let the aim be comfort, convenience, and simplicity.

In all improvements around a country house, the tendency to give things a look of newness and rawness which conflicts with the idea of repose, should be studiously avoided. If one has an old tree or two in his grounds, he has something which looks stable; let him make the most of it. Or if one is going to build a house, let him, if possible, choose his site not far from where a few old trees are standing. This will anchor him in the past, and steady him in the present. And in building or improving, let us not make everything look new-fashioned. This is pretentious, uneasy. Well does one say: "Our new efforts express intentions and aims; with age comes the expression of character." In painting houses or fences, we would rarely if ever, use white or any pure colors; these are too dazzling, staring and obtrusive. Sheds, barns and all out-buildings should be painted a somber tint than the dwelling itself.

The flower garden—where should that be put? Not in front of the house, for this suggests that the labor required in planting and tending it is all for show, and not for the love of the flowers. The front of the dwelling should be given up chiefly to grass and trees grouped and not crowded, and by no means in stiff lines, nor in regular orchard fashion. Such an arrangement is expressive of comfort and quiet. The flower and vegetable garden should hold some sunny place, at the side or rear of the house, near the house, yet not ostentatiously displayed.

Autumn Plowing for Spring Crops.

The airing of freshly turned soil in summer, results, as we know, in fitting it for a succeeding crop better than almost any other preparation, and the reason why summer fallows are not more advocated in the *Agriculturist*, is, that a root crop or green manure crop may occupy the soil and the results of the fallowing be even augmented. It is not so in winter. Sward land plowed in the autumn remains exposed to the action of the weather—to freezing and thawing, wetting and drying, for several months. The sod during a considerable portion of this time is subject to decay, and in the spring after cross-plowing and harrowing, almost disappears. The opportunity should not be neglected to put the plow down an inch or two, and this new soil which might be of damage to the crop if brought to the top in the spring, is thoroughly civilized before the crop takes possession. Weed seeds that germinate in the autumn, as many will, get their quietus. Manure if applied and plowed under in the fall though it may be buried deep, becomes considerably incorporated with the soil, and the spring plowing brings it up again, well mixed with the decayed sods, forming an admirable seed bed. Heavy soils are most benefited by autumn plowing.



A New Blackberry—The Kittatinny.

It is only within a few years that the blackberry has been included in the list of cultivated fruits. The New Rochelle and Dorchester are such marked improvements over the ordinary wild fruits that we have been apt to consider that perfection has been reached with the blackberry. There are several varieties not yet before the public, which are in some respects superior to the established sorts, and it is hoped that cultivators will go on improving this delicious fruit until all the good qualities are found combined in one berry. One of the new varieties, which we have known for two years, is called the Kittatinny, from its having originated in the mountains of that name. Though it has been in private hands for many years, it has only recently been brought to the notice of hor-

ticulturists. Early in August, in company with several amateurs, we visited a garden in Sussex Co., N. J., where this variety is in cultivation. In the habit and vigor of the plant it resembles the New Rochelle, and although the bushes had not been trained in the manner to produce the greatest fruitfulness, they were loaded with berries in all stages of development. The foliage is rather more coarsely serrate than in the New Rochelle. An illustration is given of a cluster of fruit of the natural size. The berries are longer and more irregular than those of the New Rochelle; we measured several which were an inch and-a-half long, and three inches in circumference. The pips large, with small seeds, juicy, sweet, and with a true blackberry flavor. The fruit possesses the great advantage that it does not need to be over-ripe in order to be eatable, but while still hard enough

to send to market, it is sweet and fit for the table. The crop ripens up gradually, and though the first fruit had been picked two weeks before our visit (Aug. 3), there was a great abundance of green fruit coming forward. The canes are perfectly hardy in the mountains of Sussex Co., but doubtless it would, like other varieties, be benefited by protection in winter. Should the Kittatinny do as well elsewhere, it will be a valuable addition to our limited list of varieties. To save answering queries, it may be well to state that the stock of this plant is in the hands of Mr. E. Williams, of Montclair, N. J., who has placed it in the hands of several of our most eminent fruit growers, with a view of further testing it before offering it for sale to the public, and that none will be sold the present year.

Wine-Making Suggestions.

Within a few years the culture of the grape has astonishingly increased, and there are numerous vineyards all over the country. We should be glad not to see a gallon of wine made until the fruit itself became so plenty in our markets that poor people could afford to eat and enjoy it; but such numerous requests for an article on wine-making come to the office of the *Am. Agriculturist* that they can not be disregarded.

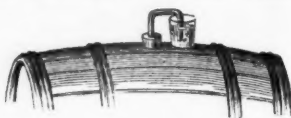
In making wine there are so many little details to be observed and so many things requisite to the best success, that it is not possible to give more than the most general directions. Wine-making is a trade which has to be learned either by one's own experience or from that of others. The quality of wine is affected not only by the process of manufacture but by the variety of grapes; and again the same kind of grape will produce a different product on different soils. Upon large estates in Europe, celebrated for their wines, vines in different parts of the same vineyard produce wines of very different qualities. Then there is a great difference of opinion as to what constitutes wine. Some apply the term to grape juice fermented with the addition of sugar and afterward fortified with a portion of brandy or other distilled spirits. We consider none of these compounds as *wines*. The only thing which should be called wine is produced by the fermentation of pure grape juice without any addition whatever. Many of our native grapes will not make a wine that will keep, yet these differ according to the locality. Thus: the Concord is a valuable wine grape in Missouri, while many at the East say that wine can not be made from it. Sugar is generally added to the juice of the Isabella, yet we recently tasted, at the house of a friend who would not deceive us, a very good, very light wine made from the pure juice of the Isabella.

Whatever the variety of the grape, it should always be left upon the vine until thoroughly ripe. A few light frosts will do no hurt, and unless the grapes commence to decay they are better left on until there is danger from frost. The fruit is to be picked carefully, all imperfect berries removed in picking from the stems, and bruised without crushing the seeds. The bruising may be done in a barrel with a pounder, or they may be run through a mill for the purpose. Some months ago we published a correspondent's method of squeezing currants, by putting them in a bag and running them through a clothes wringer. Possibly this treatment might answer for experiments with grapes in the small way. The hint is worth remembering.

After grapes have been crushed, the further treatment varies. The juice which runs from

the bruised grapes may be taken for the best kind of wine, and what can be pressed from them for a second quality, or the whole may be mixed together. The grapes must be pressed; this is usually done with a screw press, the bruised fruit being put in a coarse bag. If a light colored wine is desired, the grapes are pressed soon after they are bruised, but for a dark wine, the bruised grapes are put into a covered tub in a cool cellar and allowed to ferment. When the mass of pulp and skins rises to the top, and this crust begins to crack from the escape of bubbles of gas, then the pressing takes place. The time allowed for this fermentation on the skins will determine in a great measure the quality of the wine. The longer it is allowed to continue, the higher colored and the rougher, or more astringent the product will be.

In whichever of the above methods the juice, or *must*, is obtained, it has to be fermented. For this purpose it is put into a perfectly clean cask. A bung is then fitted to the cask which has a bent tube inserted in it. This tube is bent like an inverted letter U, one leg of which is inserted into the bung and the other dips into water placed in a cup or other vessel, as in the figure. By means of this arrangement, all the gas liberated during the fermentation passes out through the water, while the air is prevented from coming in contact with the liquid in the cask. The fermentation commences in a day or two and continues for several weeks. The



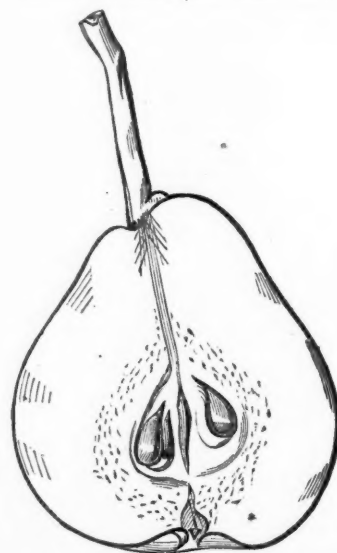
lower the temperature the slower it will go on, and the better the quality of the wine will be. When bubbles cease to pass through the water in which the tube is immersed, remove the bung containing the tube, fill up the cask with juice which has been reserved for the purpose, and place a sound bung in lightly. A month later the bung may be driven tight. Some time during the winter the wine is carefully drawn off from the lees into another perfectly sweet cask. In the spring, about the time of the blossoming of the grape, another fermentation takes place, at which time the bungs should be loosened. After this is over, the wine will usually become clear without any aid, and in a few months may be bottled, though the operation is usually deferred until winter. This is a mere outline of the process, which is variously modified according to the kind of wine desired and the peculiar views of the maker. It is essential to use the ripest grapes, observe the greatest cleanliness in all the vessels used, and to keep the casks full in order that the air shall come in contact with the new wine as little as possible. All the wines made from our native grapes, without addition of sugar or alcohol, are very light and will not bear exposure to the air.

WINTER PROTECTION.—Many things which can not be grown at the North, if left to themselves, may be, with a slight covering. Any non-conducting material that will not pack from the weight of the snow will answer. Boughs of cedar and other evergreens, and salt hay, and hay from the marshes, consisting in good part of sedges and ferns, and forest leaves, are all preferable to straw, for covering beds of strawberries, etc. Tender shrubs are bound up in straw, or have a barrel or box turned over them. Grape vines, roses, etc., are bent down and covered with a few inches of earth.



Plants Grown from Leaves.

The operation of starting a plant from a slip or cutting is familiar to all, but generally only those who have witnessed the operations of the skillful green-house propagator are aware that there are many plants which grow readily from a leaf or even a portion of a leaf. A number of green-house plants are propagated in this way, and the true lilies, i.e., those which have a scaly bulb like the white and Japanese lilies, are largely multiplied from the bulb scales, which are in reality only the lower portions of leaves. A few weeks ago a correspondent sent us by mail a leaf of *Bryophyllum calycinum* (one of the Live-for-Evers) which was carried in the pocket book for a week and then put out in the border and lightly covered with earth. In a few days, buds appeared upon the edge of the leaf, roots were thrown out, and now there are three promising plants which grew from a single leaf. The engraving above shows the leaf with the young plants springing out from its margin.



The Peters Pear—(Clift.)

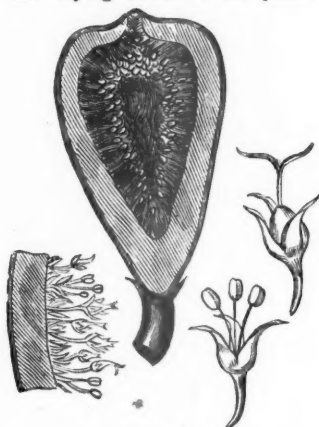
The class of really good, early pears is very small, and any addition to the number will be welcomed by cultivators. Rev. W. Clift, sends us specimens, and gives the following account of the above named pear: "It is one of our earliest summer pears, and is pronounced by competent judges very good, if not best. It is a seedling of

the Virgalieu, and was planted about the year 1848, by Rev. Absalom Peters, D. D., of Williamstown, Mass. It was several times transplanted, and finally put in the position it now occupies, about 1853. The tree stands in the garden formerly occupied by Dr. Peters. It is perfectly hardy, a vigorous grower, an abundant bearer, and gives crops every year. It has borne for three or four years, and has the present season over a bushel of fruit. The pear ripens in Williamstown, the 1st week in August, which would make it about as early as the Madeline. It is a much better pear, about the size of the Tyson, highly colored, and promises to be one of the best early summer pears."

The engraving gives the size and shape, and we add the following description: Fruit small, irregularly obovate. Skin, lemon-yellow, with a fine blush on the sunny side. Stem, stout, more than half the length of the fruit, inserted obliquely, with a large lip. Calyx, nearly closed, in a very shallow and nearly regular basin. Flesh, juicy, buttery, gritty near the core, sweet, with a rich, sprightly flavor. Early in August. We understand that steps have been taken to propagate and bring it into the market.

How Figs Grow and Flower.

But few persons who are familiar with dried figs, as they are imported in drums, would recognize them in their fresh state. They resemble a pear somewhat in shape, are very soft, and are filled with a sweet mucilaginous pulp, which is considered very delicious by most persons, though some do not like it at first, but afterward become very fond of it. In the climate of New York City, figs may be grown with fair certainty of making a crop every year, if a little care be taken. Plants may be had at the nurseries, or may be started from cuttings. They should have good soil and be allowed to grow in the bush form. At the approach of hard frosts the roots are cut around with the spade at a distance from the plant equal to about half its height. This root pruning prevents too rampant growth of the branches in spring, and also facilitates the laying down of the plant. The



A FIG IN BLOSSOM.

plant is bent over, and secured by pegs and covered with a layer of earth sufficient to protect both root and stems from injury by frost. In the Middle States, covering with a barrel or with straw, is found to be sufficient. Cutting out decaying or crowded branches, and shortening the overgrown ones, is all the pruning required. It is a common impression, even among cultivators, that figs produce fruit without ever blossoming. They do blossom, but in a very curious manner. The accompanying cut, made from a specimen brought to show that they do

not flower, will serve to illustrate the way in which they do flower. The engraving shows a young fig, cut through lengthwise at blossoming time. It is a hollow sack, or bag, with little projections all over the inside of it. This matter which lines the bag, is seen by means of a magnifier to be made up of a multitude of minute very simple flowers. A small slice, at the left-hand side of the figure, is magnified so as to show some of these flowers, and on the other side two separate flowers are shown much larger. Both staminate and pistillate flowers are found in the same fig, each raised on a little stalk. This bag is botanically called a *receptacle*. We are familiar with a large flat receptacle in the sunflower, where the small flowers are crowded on its upper surface. If we imagine the sunflower receptacle to be drawn up to form a bag, with the little flowers all inside, we shall get an idea of the structure of the fig. When the fig ripens, the remains of the flowers and their stalks, and the receptacle itself, all become sweet and pulpy, while the pistils of the pistillate flowers ripen and become *fruits*, though commonly called seeds. The fig then, instead of being a simple fruit, is really a collection of a great number of fruits which are produced by many different flowers, and it is the substance which surrounds them which popularly passes for the fruit.

THE HOUSEHOLD.

Cheese-Making in the Small Way.

"A Farmer's Wife," from Gorham, Maine, gives an account of her very successful practice in cheese-making with a few cows, in the hope of benefiting some of the readers of the *American Agriculturist*: "A large amount of good cheese might be produced from dairies of from four to six cows, if the farmers' wives only felt competent to undertake cheese-making, and were furnished with a few simple but necessary articles. The things most needed are a *cheese tub*, to "set" the milk in, a good *basket* to drain the curd in; a *lever press*, and *hoops* of two or more sizes, to accommodate the smaller supply of milk as the season advances. I was brought up on a farm, in what was then a cheese-making district, and have been for the last ten years engaged in cheese-making through the hot weather, on a farm of which I am the mistress, and as my method differs somewhat from any that I have seen recommended for either large or small dairies, and as it produces almost uniformly a good cheese which finds a ready sale, notwithstanding its small size, (perhaps partly in consequence of it,) I write my process out for the information of those who have lived—as a person told me the other day—"twenty-two years on a farm and never saw a cheese made." I take parts of several well cured rennets, and soak them in warm water a few hours, rubbing occasionally and adding as much salt as will dissolve readily; then drain the liquor and soak again a few hours; strain off the second liquor, and put it with the first, into a glass jar or bottle, adding so much rock salt that there shall always be some undissolved; cork it tight, and keep in a cool place.

When the night's milk is brought in, I strain it immediately into the cheese tub and put in rennet sufficient to bring the curd, or show that it is coming in ten minutes, and in twenty minutes the curd should be firm enough to admit of being crossed off coarsely with a wooden cheese-knife. In ten or fifteen minutes more it is cut finely and left to settle until bed time, when if it is settled sufficiently, it is dipped into the basket and left to drain through the night. If from any cause, such as late milking, or the rennet not proving strong enough to bring the curd readily, it does not separate from the whey at bed time, it is left in the tub until morning. It is much better to put it draining before going to bed, for if it remains all night in the

tub it is liable to sour, particularly in warm weather, to the very great detriment of the cheese.

In the morning the tub is prepared by simply rinsing in cold water, unless the weather is cold, when hot water is used, in order to warm the tub so that it may not cool the milk. The morning's milk is strained into it, and the same process as with the night's milk, is gone through with, until it is ready to drain, when it is dipped into the same basket with the curd formed from the night's milk, and thenceforward both are treated together.

The whey that runs off in the morning is saved to scald the curd with, and is carefully heated over a slow fire so as not to scorch it. When the curd has become sufficiently firm to admit of being cut in slices, which condition may be hastened by frequently cutting it with a case knife, and by a light weight laid upon it, it is put back into the tub, cut in thin slices and "scalded," not so as to melt the curd and make it run together, but merely to harden it. My rule for the temperature of the scalding whey is, that it should feel hot to the hand, but not hot enough to burn the hand, as the whey is poured over it, while moving the curd in the tub, so that it may all become equally scalded. Enough hot whey is thus poured over the curd to cover it, and fifteen or twenty minutes is sufficient time to be allowed for scalding. Then it is dipped again into the basket to drain and cool. Half an hour, with an occasional cutting and turning, is sufficient for cooling, when it is again put in the tub to be chopped fine and salted. A cup of salt, for a cheese weighing from 10 to 12 lbs. when dry enough to market, is the quantity that I use. It is then put in press and subjected to a moderate pressure until toward night, then it is turned, and an increase of pressure added until the next morning, when it is ready to remove to the curing room. In two or three weeks, if the weather is favorable, with proper care, rubbing and turning over every day, these cheeses will be ready for market.

The advantages of this method over others described, are, that it prevents the cream from separating from the milk, with which it can never again be so thoroughly incorporated. It saves the labor of cooling and again warming the milk, and it makes a good cheese. Try it and see."

How to Make Catsup.

Large quantities of tomatoes, cucumbers, peaches, plums, etc., received at New-York market, sometimes remain unsold until too much decayed to be disposed of as vegetables or fruit, but they are not thrown away as worthless. Parties are ready to buy them at a cheap rate for making catsup, and immense quantities of such produce are used in manufacturing much of this article on sale in the stores. Better fruit will give a better article; but knowledge of the above fact may enable some to turn to account much that would otherwise be lost.—In making catsup the main requisite is to incorporate the pulp well with spices or vinegar.

TOMATO CATSUP, which is most used, may be well made as follows: Select perfectly ripe sound fruit, cut in slices, and boil until the pulp is cooked soft. Rub it through a sieve to take out the skins and seeds, and replace it in the kettle for cooking. To each gallon of pulp add three tablespoonfuls each of salt, ground pepper, and mustard, and one of ground allspice. Enclose four large sweet peppers, and two or three garlics, or one large onion in a small bag, and boil in the catsup. The garlic or onion may be omitted if the flavor is not relished. Cook it until of the right consistence. It should be just thick enough to run slowly from a bottle. When cool, pour it into bottles, cover them with a bit of cotton cloth tied on the neck, and leave it three months to ripen; then cork and seal.

GRAPE CATSUP.—Place grapes in a kettle surrounded with boiling water. To each quart allow a teaspoonful of broken cinnamon, one of mace, and a half teaspoonful of cloves. Let it simmer over water one hour. Strain the juice and pulp, add to each quart a pound of sugar, and then boil again until reduced to nearly a jelly. Thin to proper consistence with vinegar, bottle, cork and seal.

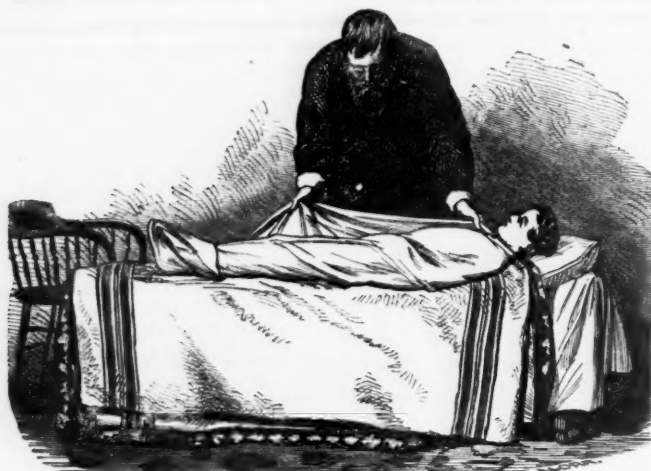


Fig. 1.—PUTTING INTO THE WET SHEET.

The Treatment of Scarlet Fever.

Those who read the *Agriculturist* need not be told of the caution which it exercises in regard to all medical matters, that while it frequently gives recommendations in regard to preserving health, it seldom publishes recipes for curing disease, and that it does not allow patent medicine advertisers to use its columns. It may be said by some that in publishing the present article it departs from its usual custom and has undertaken to teach its readers how to treat that most terrible disease—the scarlet fever—with a wet sheet. As will appear presently, the article is written with an entirely different object. Others may say that, as the article is on the use of water, we are converted to hydropathy. No, not to that nor to any other pathy. The distinction between the true physician and the quack is just here: the physician uses any curative agent that he thinks will help his patient, while the quack starts with some particular remedy or remedies, which he applies to all diseases, in all constitutions. No class of men have a monopoly of the use of any remedial agent, and water has always been recognized by physicians as one of these. Our object in publishing this article is this: Dr. R. W. Mathewson, of Durham, read before the regular meeting of the State Medical Society, of Connecticut, held at New Haven, May 25–6, a paper upon the treatment of Scarlet Fever. A portion of his practice was in the family of one of our friends and his success was very remarkable. The article was published in the transactions of the Society, with illustrations showing the manner of treatment. As the subject seems to be one of great importance to the medical profession,



Fig. 2.—IN THE SHEET: ENVELOPED IN BLANKETS.

and as the volume in which Dr. Mathewson's article was published, has necessarily a very limited circulation, it was thought that there could be no more efficient means of reaching the whole body of the medical profession than to give an abstract of the article in the *Agriculturist*, as that goes into every neighborhood in the country, and will through the people reach the eye of almost every medical man. Here is a method of treating one of

the most dreaded diseases, set forth by a regular physician, who publishes it in a periodical of acknowledged standing, and we merely wish to submit it to a wider circle of medical men than would otherwise meet with it. It is distinctly to be understood that this is not recommended by the *Agriculturist* as a domestic remedy, to be applied without advice. Scarlet Fever is too dangerous a malady to be tampered with, and under the best treatment, is too often fatal. What we wish the reader to do is to submit the article to his family physician, and to implicitly follow his advice, and if it is decided to use the water treatment at all, it should only be done under his immediate supervision. The first part of Doctor M.'s article is occupied by quotations, from high medical authorities, upon the use

of cold affusions in Scarlet Fever, and he had been accustomed to the use of cold lotions, compresses, etc., himself. A child in a family he attended was taken with Scarlet Fever. In his absence the child's father, who had previously used the wet sheet in fevers, put the child into a wet sheet pack, which reduced the pulse from 180 to 130. The following is almost exactly in the words of Dr. Mathewson:

"I denounced the practice, and warned the father of the sequences which would be likely to follow such treatment; in this I was, however, disappointed, and have since witnessed its effects in twelve cases, with the most satisfactory results. It acts as a universal fomentation, warmed by the heat of the patient. By its repelling effects on the surface, and consequent reaction, it relieves the congested capillaries, which constitutes the eruption, it opens the constricted and constricted pores of the skin, and, by keeping the cuticle in a moist state, favors absorption and exhalation, aiding the eliminating efforts of the disease to discharge the morbid matter, through nature's chosen surface for its expulsion from the system, thereby removing the cause of morbid excitement and local complications. — The earlier the pack is used in a case, so as rather to anticipate the eliminative effects of the disease, the more marked the effect; it may be used as soon as the heat and dryness of the skin and frequency and fullness of the pulse is above the natural, and with a freedom in proportion to the urgency of these symptoms. — I have usually applied the wet sheet during the evening exacerbation, while the excitement was near its height; its effects have

been to reduce the frequency of the pulse 20 to 40 beats a minute, to calm excitement and produce quiet sleep in from 10 to 15 minutes; some children, frightened by the first application, have kept awake half an hour. By the use of the wet sheet, we seem to have the frequency of the pulse, the arterial and nervous excitement, under control as with a damper. The luxury of the pack is a great consideration. I have known children cry for its repetition on a return of the fever. The effect of the pack on the nerves and vessels of the skin, while

it changes it from the harshness of parchment to the softness of velvet, produces a sense of comfort hardly describable; in fact the patient in this changed condition hardly knows himself.

In neither of the cases treated by me with the wet sheet, was there the slightest sequelæ following, although in an epidemic where complications were frequent. In some cases the inflammation of the throat and glands disappeared immediately after using the pack without local treatment."

The case of one woman, who was packed by her friends, terminated fatally, and the Doctor remarks, "It is important to be sure of reactive power in the system before using the wet sheet."

DIRECTIONS FOR PACKING.

"Place upon a cot or mattress, one or two comfortable blankets, enough to make four in all, — the number of each can be varied according to the supply — then a linen or cotton sheet wrung out so as not to drip, in water at 70° Fahrenheit. The thinner and dryer the sheet, the less the effects; the higher the temperature of the surface, and the quicker and fuller the pulse, the thicker and wetter the sheet may be. The sheet should extend below the feet about half a yard, and if too long it must be doubled down at the other end.

The patient totally undressed, is laid upon the sheet in all his length, with his arms close by his sides, and quickly enveloped in the sheet; first the side towards the packer is carried over and tucked under the opposite side evenly and closely about the neck; next it is brought over the feet, and then the other half is brought over and tucked under in the same way; then each part of the first blanket is carried over in the same manner; then a bottle



Fig. 3.—USE OF THE DRIPPING SHEET.

of warm water is placed at the feet to insure reaction; then the other coverings are each applied in the same way, taking care so to apply them to the neck, that no heat can escape or air enter any part of the pack; now a cloth, dripping with cold water, is applied to the forehead, extending back to the pillow; in this state the patient is to remain until he becomes restless from perspiration, which will be in about an hour. There is a slight restlessness when the perspiration is starting through the skin; he should not be removed at this time. * * * When taken from the pack, the patient is to be quickly wet with water at a temperature of 70°, by immersion, or by quickly throwing the water over the patient while standing in a tub, or what is better, a dripping sheet wet in the water and thrown over the patient while standing in the tub. (See cut.) The patient is to be rubbed briskly through the sheet, then with the bare hand and lastly through a dry sheet thrown over him in the same way. He is then to be placed in bed, with a bottle of warm water at his feet, to assist reaction.

The pack is to be repeated whenever the fever returns, usually the next evening, and as long as the fever continues, with the above precautions.

This method of using the wet sheet, is the same as is used in other febrile diseases, pulmonary inflammations, and cases requiring increased action of the surface. The dripping sheet with the subsequent treatment, as above described, without the pack, has the effect of a plunge or sponge bath, in cases where a quick impression is desired to excite action and equalize excitement. The entire surface being protected by the sheet during the frictions, the unpleasant chill from the evaporation, as in the other methods, is avoided.

While using the wet sheet pack, I have given the Tincture of Chloride of Iron, as in other cases, and a gargle of Chloride of Potash.

I always insist upon the most thorough ventilation of the apartments, keeping windows open more or less according to circumstances, night and day; protecting the patient from drafts is very important for the good of patient and attendants."

To Dye Butternut Color.

M. Gay, sends to the *American Agriculturist* the following directions: In any convenient vessel (as a large trough) place a layer of butternut bark, the rough portions being removed, then a layer of wool or yarn, another of bark and so on. Fill the vessel with water, and weight the goods to keep them under. Air the fabric every day by spreading in the sun; this will set the dye. Goods for men's wear are treated in this manner. For plaid dresses and material for children's wear, the bark and yarn in alternate layers are placed in an iron kettle, and warmed over a fire once or twice a day. The goods are to be aired in the sun every day as before. This gives a much darker shade, and is preferable for many purposes. This dye will not injure cloth as sumach berries sometimes do.

Soda and Saleratus in Food.

"H. W. W." inquires: "What effect soda or saleratus has in a compound of sweet milk, flour, and eggs." No good effect, we should suppose. Many of the recipes sent to us contain an inordinate amount of these articles, and they are introduced into some where they can be of little or no use. If the soda and saleratus are well made, they will give off a portion of their carbonic acid by heat alone, and the escape of this will render the compound somewhat lighter, and a disagreeable alkaline salt will be left. According to the writer's notion these articles should never be used without some acid to combine with them—cream of tartar, for instance. This will set free the carbonic acid and make the cooking light, and at the same time convert the alkali into a tasteless compound. When soda or saleratus is mingled with sour milk, its lactic acid unites with the alkali, setting free the volatile carbonic acid, which produces the "lightness," the same as when cream of tartar or tartaric acid is used. He is moreover of the opinion that really good cooks use but very little of these articles, except to correct the acidity produced by over-fermentation in raising dough.

Hints on Cooking, etc.

To keep Mince Meat.—George P. Passmore, Chester Co., Pa., writes to the *American Agriculturist* that mince-meat prepared at any time of the year may be kept entirely sweet for months by packing it in stone jars, and covering the surface with say half an inch of molasses to exclude the air. This is worth remembering when at any time a larger quantity of beef is cooked than is wanted immediately. [A layer of lard over it will keep it.]

Omelet.—Contributed to the *American Agriculturist* by Louisa J. Wilson, Armstrong Co., Pa. Beat together four eggs and one cup of sweet milk. Have ready a skillet with a piece of butter the size of a walnut, on a moderate fire. When the eggs are beaten, place them in a skillet and cook ten or fifteen minutes. [A capital addition to the above is, parboiled ham cut into small bits and mixed with the omelet when placed in the skillet.]

Flake Pudding.—Contributed to the *American Agriculturist* by Ivy Adams, Clinton Co., O.: Take 3 eggs and 3 cups of milk, stir in flour until it makes a thin batter, put a small quantity in the pans to allow for raising, bake quickly.

Sponge Cake.—Contributed to the *American Agriculturist* by Mrs. B. McClellan, Sandusky Co., O.: Mix 6 eggs, thoroughly beaten, with 2 cups sifted sugar, 2 cups sifted flour, 1 teaspoonful cream tartar, $\frac{1}{2}$ teaspoonful soda, and a little salt.

Salt Rising.—Mrs. Wm. Jackman, of Williamsburg (no State given), gives her process of raising bread: "The first thing in the morning when the tea-kettle boils, I take a pint of boiling water and put a teaspoonful of salt into it, let it stand until cold enough to bear my finger in it, then stir in flour enough to make a batter (using a quart pitcher for the purpose) then set it to rise, by placing the vessel containing the batter inside of a pot of warm water, kept just warm enough to bear the finger in. After it has stood 2 or 3 hours, stir in a tablespoonful of Indian meal, and when the vessel runs over, which will be 4 or 5 hours from the first, mix the dough and make into loaves, set them in a warm place, and cover to rise. When risen enough, bake. The above quantity is for 7 pounds of flour."

Cucumber Catsup is an excellent sauce and very readily made. Select large cucumbers just before they turn yellow, peel and grate them; let the juice drain out through a colander or sieve, then rub the pulp through a sieve to remove the seeds. Half fill bottles with the pulp and then fill up with moderately strong vinegar. Keep it corked tightly. Add salt and pepper when used at the table.

For more Household Items, See Basket.

BOYS & GIRLS' COLUMNS.

A Resurrection Fish—The Mud Fish.

When the description and illustrations of the "resurrection plants" were made for the August *Agriculturist*, we did not expect to be able to present an engraving of an animal possessing similar powers. There is a fish found in Africa which adapts itself in a remarkable way to the peculiarities of the region in which it lives. It is found in the river Gambia, a stream which during some months of the year spreads over a great extent of country, but in the dry season gradually diminishes in size and occupies a very narrow bed. This peculiar fish enjoys itself in the time of high water, but when the river begins to recede, it goes into the mud and covers itself with a thick slimy coat. The heat of the sun bakes the mud as hard as a brick, and the fish is there enclosed beyond all possibility of escape, and it has only to wait patiently for eight or nine months until the annual rise of the waters softens the mud and soaks it into renewed life. Mr. Barnum of the Museum procured several of these fish which were enclosed in sun-baked mud just as they were broken out of the river bed. We had the pleasure of see-

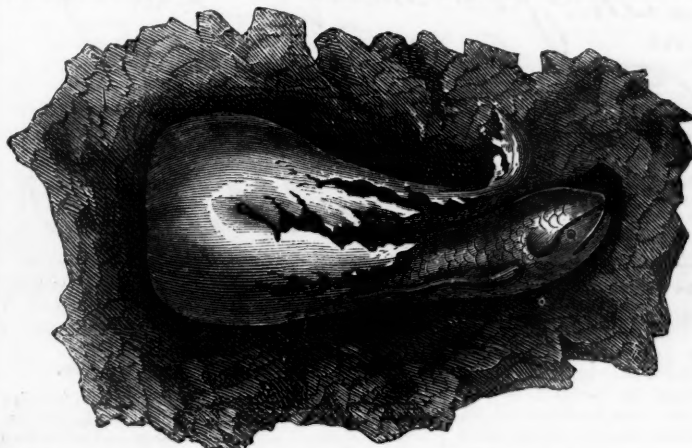


Fig. 1.—RESURRECTION FISH ENCLOSED IN DRIED MUD.

ing one of these opened. The ball of clay was carefully sawed apart, and the fish exposed as is shown in the upper engraving. It was apparently "as dead as a herring." The thick leathery coat of hardened slime was carefully removed, and the fish placed in a tank of water. After soaking a few minutes, it gradually began to stretch itself and awoke from its sleep of many months, and in less than half an hour was swimming around in a lively manner. The below engraving shows the animal after awaking. It is about a foot long, of a dark gray color, with some black markings, and looks somewhat like an eel, and something like a lizard. The four appendages which appear like legs are slender fins. Naturalists have been puzzled whether to consider the animal as a reptile or as a fish, but the best writers decide that it is fishy. It is said to have both lungs and gills, and it is probable that during its long term of sleep it carries on a slow breathing. The name given to it by naturalists is *Lepidosiren*, which means scaly siren—siren being the name for a kind of reptile. The animal is said to be good as food and to be much sought after by the natives of the country where it is found. Their summer fishing excursions must be rather curious affairs, as instead of hook and line, each fisherman will need a hoe and shovel, or as those implements are scarce in that region, they very probably pursue their sport with a sharp stick, or some other instrument. Both this and the plant de-

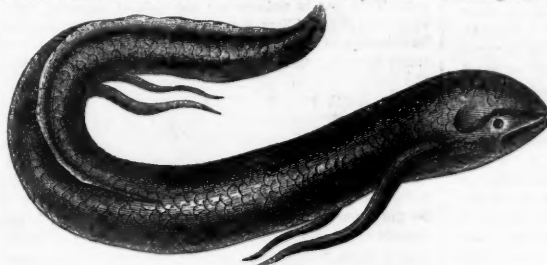


Fig. 2.—RESURRECTION FISH SWIMMING.

scribed in August, should be thought of as something more than mere curiosities. They are remarkable illustrations of the Wisdom which endows both plants and animals with powers and instincts to enable them to live where those with a different organization would perish.

Too Much Display.—An Anecdote.

Most young people are very fond of display in dress. Rings, breastpins, and similar superfluities are all in great demand among them. We have known a girl to spend a month's wages for a single article of this kind, and a young man to run in debt for a cane when he had scarcely clothing enough to appear respectable. The following story of a successful merchant will show to such, how these things look to sensible people. Said he: "I was seventeen years old when I left the country store where I had 'tended' for three years, and came to Boston in search of a place. Anxious of course to appear to the best advantage, I spent an unusual amount of time and solicitude upon my toilet, and when it was completed I surveyed my reflection in the glass with no little satisfaction, glancing lastly and approvingly upon a seal ring which embellished my little finger, and my cane, a very pretty affair, which I had purchased with direct reference to this occasion. My first day's experience was not encouraging. I traveled street after street, up one side and down the other, without success. I fancied toward the last, that the clerks all knew my business the moment I opened the door, and that they winked ill-naturedly at my discomfiture as I passed out. But nature

endowed me with a good degree of persistency, and the next day I started again. Toward noon I entered a store where an elderly gentleman was talking with a lady near by the door. I waited until the visitor had left, and then stated my errand. 'No sir,' was the answer, given in a crisp and decided manner. Possibly I looked the discouragement I was beginning to feel, for he added, in a kinder tone, 'are you good at taking a hint?' 'I don't know,' I answered, and my face flushed painfully. 'What I wish to say is this,'

said he, looking me in the face and smiling at my embarrassment, 'if I were in want of a clerk, I would not engage a young man who came seeking employment with a flashy ring upon his finger, and swinging a cane.' For a moment mortified vanity struggled against common sense, but sense got the victory, and I replied, with rather a shaky voice. 'I'm very much obliged to you,' and then beat a hasty retreat. As soon as I got out of sight I slipped the ring into my pocket, and walking rapidly to the Worcester depot, I left the cane in charge of the baggage-master 'until called for.' It is there now, for aught I know. At any rate, I never called for it. That afternoon I obtained a situation with the firm of which I am now a partner. How much my unfortunate finery had injured my prospects on the previous day I shall never know, but I never think of the old gentleman and his plain dealing with me, without always feeling, as I told him at the time, 'very much obliged to him.'

How to See a Ghost.

Draw a picture of the object you would like to have appear. Let it be made with as few lines as possible, and be filled in with plain black, or other color, without light shading. Or the picture may be entirely white, surrounded with plain black, with only a few lines to make the figure distinct. Hold the object near a strong light, and look steadily upon a point near the top of it for about a minute, and then immediately look on the wall or other plain surface in a dark part of the room, and the figure will appear greatly enlarged. The color of the "ghost" will be the opposite, or "complementary" as it is called, of that of the picture. A blue picture produces an orange colored image; red gives green; green, red, etc. A book of amusing pictures of this kind, for raising ghosts, is advertised in our columns, and it will afford much amusement in a winter evening. This experiment shows how many so-called ghosts may have been caused. When we gaze steadily at an object for a short time, an impression is made on the nerve of the eye and through it on the brain and mind, which does not immediately disappear; thus we seem to see the image wherever the eye is turned, and it appears plainest, looking into the dark.



The Travels of a Letter.

Some time since Mr. Edwin James, of New-York, sent to the office of the *American Agriculturist* a very odd looking letter envelope. Above is an engraving of it. It was placed in a Post Office in England, by Mr. James, directed to "Mr. John Sherriff, East Buckland, Thurlstone." The Postmaster at that place could not find Mr. Sherriff, but thinking he might be at Derby, forwarded the letter there. The Postmaster at Derby had no better success, and tried another place, and so the letter traveled on in search of Mr. Sherriff. In every place where it was thought he might be found, and failing to reach him, it was finally sent back to its writer, Mr. James, containing the marks of fourteen Post Offices, through which it had passed, and all this trouble cost but one penny. This shows how much care is taken in England to have letters properly delivered, or returned to their writers, if the persons addressed can not be found. We hope our own Post Office system may soon be as complete as this.

A Wealthy Sentinel.

The following anecdote is related of a soldier in the English army in 1774, who was called out with his Company to resist an expected invasion. He was of German birth and very rich. It fell to his lot one cold wet night to be stationed as sentinel over a baggage wagon. In about half an hour after taking his place, he called out, "Corporal de guard!" The corporal came and inquired what he wanted. He asked to be relieved a few moments while he spoke to the commanding officer of the regiment. His request was granted and soon he stood before the general. "I wish to know," said he, making his salute, "what that wagon is worth which I was placed to guard." "I can not say exactly," was the reply. "Never mind the exact amount, come somewhere near it." "A thousand dollars," said the general. "Well then general," said the comfort-loving soldier, "I will write a check for the money, and then I will go to bed." He was very much astonished and highly indignant, when told the rules of the camp admitted no such transaction, but he must do his duty until regularly relieved.

Curious Freak of a Hen.

Mrs. S. A. Smith, Green Lake Co., Wis., writes to the *American Agriculturist* describing the singular conduct of a hen in her neighborhood. She was determined to sit, but her eggs were taken away and she driven off several times. Finding no prospect of securing a family in the natural way, she adopted other and rather extraordinary means to accomplish her object. She came across an old cat with a litter of kittens in the barn, drove away the mother, and took the little ones under her own protection. Two of them were dark colored, and one yellow; the latter she would not own at first, but finally admitted her under her wings with the rest. How she proposed to nourish her strange brood does not appear, but when she was driven away from them, she fought as de-

terminedly as though they had been her own chickens. Such perseverance deserved a nestful of eggs over which her maternal instincts could have been fully satisfied.

Use Plenty of Fresh Air.

The earth is surrounded with an ocean of air, forty-five miles deep. There is plenty of it for every living creature, for all time to come, and ample provision has been made by the Creator to keep it pure and fit to be breathed and sustain life. It is well for us that this is so; without it all must soon die. How does breathing keep us alive? To understand the matter it is necessary first to know something about the blood and its circulation in the body. This fluid is made up of particles taken from the food. By means of the heart, and small tubes (arteries) leading from it, it is carried to every part of the body, and from it are taken materials for flesh, bone, skin, hair, etc., to increase the growth, or to supply the place of those parts which have been worn out by use. The blood having been distributed to every part of the body through the arteries, passes into another set of tubes (veins,) which conduct it back towards the heart, going through the lungs on its way. On its way thither it receives into its current, the waste or worn out particles which are no longer fit to sustain the system. These are largely made up of a substance called carbon, which you often see in the form of charcoal, or nearly pure carbon. When the blood reaches the lungs, it is there divided through myriads of minute veins, each one of which passes around an exceedingly small sac or cell of very thin membrane or skin, which is filled with the air drawn in by taking breath. While passing around these cells, a surprising change takes place in the blood. One part of the air called oxygen, passes through the membrane, unites with the carbon, forming a new compound called carbonic acid gas, and this is expelled from the lungs and through the mouth and nose by expiration or breathing out. This gas is poisonous; any animal confined in it very soon dies. Thus you see breathing keeps us alive by bringing in air to purify the blood. If the waste particles were not thus separated, they would soon poison the whole system. If this process is stopped by any means, death very speedily follows, as in the case of choking or drowning, which prevent the air from entering the lungs. If the air itself is impure from having been breathed once or twice and thus partly changed into carbonic acid gas, it can not purify the blood, but will poison it, and if this be continued, disease and death will be the consequence. From this it is easy to see the necessity of having plenty of fresh air in houses; of ventilating them, to allow the impure atmosphere to escape, and the pure air to enter. An equally important lesson to be learned, is to allow the lungs to draw in all the air possible, that the blood may be thoroughly purified. This is often prevented by wearing tight clothing, but more frequently by sitting or standing with the shoulders, thrown forward and the body half bent. Such a position prevents the lungs from expanding fully, they grow

smaller, the shoulders become rounded, the chest narrow, and thousands become consumptive and die from disease brought on in this way. Throw back the shoulders, hold up the head, sit and stand erect, and give the lungs full play. This gives a finer form more vigorous health, and longer life. The habit of doing this, or of neglecting it will be formed in youth, and we desire that every girl and boy who reads the *American Agriculturist* should grow up strong in body, in intellect, and pure in heart.

New Puzzles to be Answered.



No. 101. *Geographical Questions* proposed by "Harry Greenwood," Belchertown, Mass. 1. How many "Union Counties," are there in the Southern States? 2. How many "Lincoln Counties"? 3. In what State is McClellan County? 4. How many "Coffee" Counties in the Southern States? 5. In which States are Sampson and Sunflower Counties?—The studying out of such questions will add to one's geographical knowledge.

No. 102. *Transposed Poetry*.—Contributed to the *American Agriculturist* by L. E. Hewins, Norfolk Co., Mass.: How will it read, if rightly arranged?
Nuhyslsuoiditsafew,tegotysaesitahw.

No. 103. *Mathematical Problem*.—A and B, with C working half the time can do a piece of work in 21 days; B and C, with D half the time can do it in 24 days; C and D, with A half the time, in 28 days; D and A, with B half the time, in 32 days. In how many days can each do it alone; how long will it take when all work together?



No. 104. *Illustrated Rebus*.—Worth remembering by all.

Answers to Problems and Puzzles.

The following are answers to the puzzles in the September number, page 274. No. 96. *Illustrated Rebus*.—*Con st ant drop in g wares a stone*; or, Constant dropping wears a stone. No. 97. *Word Puzzle*.—The seven nouns are the names of the days of the week. No. 98. *Illustrated Rebus*.—*A still tongue's peak saw eyes head*; or a still tongue speaks a wise head. No. 99. *Double Geographical Acrostic*.—First, *Augusta*; Second, *Trenton*. 1, Ararat; 2, Ulster; 3, Greece; 4, Union; 5, Scheldt; 6, Toronto; 7, Androscoggin.

The following have sent in correct answers up to September 19th. Henry H. Osgood, 93, 95; Mrs. Mary Neusom, 93; William Scott Holland, 93; E. P. Harnish, 96, 98, 99; George G. Parker, 99; Frederick E. Parker, 99.

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ATTRACTIVE PRICE LIST.

The AMERICAN AGRICULTURIST for February, 1864, page 37, has the following:

"War Maps."—We have received from H. H. Lloyd & Co., several very good maps, among them one which shows at a glance, and in an interesting form, the progress of the war, the original and the present territory occupied by the rebels, the battle fields, etc. Notice that this is H. H. Lloyd & Co., 21 John-st.,—a prompt and responsible House, we have every reason to believe."

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Battle of Chancellorsville.
Heroes Slain.
Our Naval Heroes.
The Picket.
The Traitor.
Basket of Fruits.
Flowers.
Choice Fruit.
The Dove.

Lieut. Gen. U. S. Grant.
Maj. Gen. George G. Meade.
Maj. Gen. George B. McClellan.
Maj. Gen. B. F. Butler.
Maj. Gen. W. S. Hancock.
Maj. Gen. W. T. Sherman.
Maj. Gen. A. E. Burnside.
Maj. Gen. Pauline Cushman.
Lincoln and Johnson.
Ten Rebel Generals.
Catching a Guerrilla.
Crucifixion and Resurrection.
Sermon on the Mount.
Christ Blessing Little Children.

Kearsarge sinking the Alabama.
Seeing the Elephant in New-York.
Politicians Measuring Lincoln's Shoes.
The Aquarium.
George Washington.
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Beauty and Luxury.
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A Glorious Sleigh-Ride.
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A new parlor amusement. "SPECTROPIA; OR SURPRISING SPECTRAL ILLUSIONS, showing Ghosts everywhere and of any color," with Illustrations in colors.

This book is an entire novelty, and enables the spectator to behold life-sized ghosts on the wall or ceiling, without any apparatus, by the mere application of a well known principle in optics, affording exhaustless parlor amusement. Quarto, bound. Price One Dollar. Mailed post free on receipt of price.

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Payment received in installments if desired. Pianos to Rent. **H. E. BAILEY & CO.,** No. 603 Broadway, New-York.

Rats, Cockroaches and Bugs

are infallibly exterminated or driven away by Isaacsen's Remedies, and they leave no scent behind,—so says Mr. Judd in the American Agriculturist. For rats, mice and cockroaches, try a box of Phosphoric Paste, 60 cents, large size \$1.25; for bugs, ants, etc., use a bottle of Insect powder, at same prices. Send to

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For sale also by **BURNHAMS & VAN SCHAAK,** 16 Lake-st., Chicago, Ill.

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Supplies Principals, School Officers, and Families with well qualified Teachers of known ability: Represents Teachers who desire engagements: Gives Parents and Guardians information of good Schools: Negotiates Sales and Rentals of School Properties. ALL Teachers should have "Form of Application;" also copy of *Amer. Educational Monthly*—each sent for one red stamp.

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—What of the Features? A Long Nose, a Short Nose, a Blunt Nose, or a Sharp Nose. What does it indicate? Blue Eyes, Gray Eyes, Black Eyes; Auburn Hair, Brown Hair, Black Hair, Red Hair; Cheeks, Chins, Lips with dimples in them; what do they signify? See the **Illustrated Phenological Journal**, October No., 20 cents, or \$2 a year. Address **S. R. WELLS,** Editor, No. 389 Broadway, New-York.

Articles for Every Family.

Pyle's Saleratus, Pyle's Cream Tartar, Pyle's Blueing Powder, and Pyle's O. K. Soap. These articles are the best in use, full weight, therefore economical.

JAMES PYLE, Manufacturer,
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SOLD BY GROCERS EVERYWHERE.

Strong Concord, Delaware, Rogers'

Hybrid, Allen's Hybrid, Creveling, Hartford Prolific, Diana, Maxatawny, Adirondac, and Iona, at low prices. We call particular attention to Rogers' Hybrid, No. 19, as the largest, earliest, and best hardy black grape yet introduced. It is a cross between the Black Hamburg and native, combining the fine flavor of the foreign with the hardiness of the native. Our vines are produced from the wood of the original vines of which we have the entire stock.

Salem, Mass., Nov. 26, 1863.
[Received of Wm. Perry & Son, seventy-five dollars for all the wood of my No. 19, Rogers' Hybrid. E. S. ROGERS.]

Descriptive catalogues containing a cut of Rogers' Hybrid sent to all applicants enclosing stamp to prepay postage. Address **WM. PERRY & SON, Bridgeport, Conn.**

GRAPE VINES.

My stock raised this season is very fine. 12 good, strong, well grown Delaware Grape Vines will be sent, post-free, by mail to any one sending a \$5 U. S. note. Any of the following may make part of the bill at the annexed rates per doz. Adirondac, \$24 per dozen; 2 year old, \$36 per dozen. Iona and Israelita, \$15 per dozen; 2 year old, \$24 per dozen. Allen's Hybrid, \$9 per dozen. Creveling and Maxatawny, \$6 per dozen. Rebecca and Diana, \$3 per dozen. Concord, Hartford Prolific, and Clinton, \$2.50 per dozen.

Loomis Honey, \$15 per doz.; 2 year old, \$24 per doz. This exceedingly sweet grape was exhibited last season at the office of the Agriculturist, and pronounced by the Editor to be "worth looking after."

ORNAMENTAL TREES and SHRUBS, embracing many of the new and rare Evergreens, are offered at moderate prices.

The Japanese Variegated Honeysuckle, described in the last number of the Agriculturist, will be sent, two plants, post free, by mail, upon receipt of a \$1 U. S. note. Address **MAHLON MOON, Morrisville, Bucks County, Penn.**

Grape Vines by Mail.

Lower than any other reliable propagator. All the leading varieties at greatly reduced prices. Varieties warranted true.

PRICE LIST.

	One.	Two.	Three.	Size.	Dozen.
Adirondac	\$3.00	\$6.00	\$9.00	\$17.00	\$33.00
Concord	25	45	60	1.15	2.20
Creveling	75	1.40	2.00	3.75	7.00
Cuyahoga	75	1.40	2.00	3.75	7.00
Delaware	35	60	85	1.60	3.00
Diana	30	55	80	1.50	2.75
Elsinburg	35	60	85	1.60	3.00
Hartford Prolific	50	95	1.40	2.75	5.25
Herbemont	50	95	1.40	2.75	5.25
Rebecca	50	95	1.40	2.75	5.25
Taylor	25	45	60	1.15	2.20
Union Village	75	1.40	2.00	3.75	7.00

One each of above varieties, Eight Dollars.

Above prices by Mail, post-paid. Lower by Express. Address **J. H. FOSTER, Jr., Box 690, West Newton, Westmoreland County, Penn.**

True Delaware Grape Vines.

From the original vine. Also fine plants of Concord, Creveling, Iona, Israelita, &c. Send stamp for priced list of 50 kinds, to **GEO. W. CAMPBELL, Delaware, Ohio.**

GRAPE VINES BY MAIL OR EXPRESS, including both old and new varieties. For circular, prices, &c., Address **H. B. LUM, Sandusky, Ohio.**

Dutch Bulbous Flower Roots.

Sent by Mail, post-paid, at Catalogue Prices.

B. K. BLISS,

Seedsman and Florist, Springfield, Mass.,

Has just received direct from Holland, a large and well selected assortment of the above from the same source as heretofore sold by him, and given such perfect satisfaction. The assortment embraces the finest varieties of: DOUBLE AND SINGLE HYACINTHS; POLYANTHUS NARCISSUS; DOUBLE AND SINGLE EARLY AND LATE TULIPS; DOUBLE AND SINGLE NARCISSUS; JONQUILS; CROCUS; CROWN IMPERIALS; IRIS; SNOW DROPS; SCILLA; HARDY GLADIOLUS; RANUNCULUS; ANEMONES; JAPAN AND MANY OTHER LILIES. Also a fine assortment of GREEN-HOUSE BULBS, comprising CYCLOMUS; LILIA; OXALIS; SPARAXIS; TRITOMAS; ACHIMENES; GLOXINIAS, &c., &c.

His new Autumn Catalogue containing an accurate description of each variety, with particular directions for the culture of each species, so that any person, however unacquainted, can not fail to succeed, will be mailed to all applicants enclosing two three cent stamps. Collections of the above, containing many of the most approved varieties will be mailed, post-paid, to any address in the Union, as follows: **Collection No. 1, \$20; No. 2, \$10; No. 3, \$5; No. 4, \$3.**

For further particulars, see the Catalogue. October.

B. K. BLISS,

Standard and Dwarf Pears.

HOVEY & CO., Boston, Mass.,

Invite the attention of dealers and planters to their large and fine stock of Pear Trees, including all the new and choice varieties.

PEACH TREES, &c.

EDWIN ALLEN offers a large stock of Peach Trees, of the best orchard varieties. Also a fine stock of Pear, Plum, Cherry, &c., &c. Prices low. Catalogues upon receipt of stamp. New Brunswick, New-Jersey, October, 1864.

Trees! Trees!! Trees!!!

Rare chances for large Trees. 50,000 extra fine Apple Trees 8 to 10 feet high, sorts well suited to Southern and Central Pennsylvania. Prices reasonable for size and quality of trees. No Agents either traveling or stationary, recognized unless bearing authority from the Proprietor. Address **DAVID MILLER, Cumberland Nurseries, Carlisle, Penna.**

Advertisements.

Advertisements, to be sure of insertion, must be received **BEFORE the 10th of the preceding month.**

N. B.—No Advertisement of Patent Medicines or secret remedies desired. Parties unknown to the Editors personally or by reputation, are requested to furnish good references. We desire to be sure that advertisers will do what they promise to do. By living up to these requirements, we aim to make the advertising pages valuable not only to the readers, but to the advertisers themselves.

TERMS—(cash before insertion)

One Dollar per line, (14 lines in an inch), for each insertion.
One half column (74 lines), \$65 each insertion.
One whole column (148 lines), \$120 each insertion.
Business Notices, One Dollar and a Quarter per line.

FOR THE BEST SELECTED STRAWBERRIES, Raspberries, and Blackberries, which yielded for me the past Summer over 1,500 bushels of Fruit. Send for Catalogue gratis. **WILLIAM PARRY,** Cinnaminson, Burlington Co., N. J.

STRAWBERRY PLANTS of the most popular varieties, and new growth now ready for sale. Catalogues sent gratis to all applicants. **SAMUEL L. ALLEN,** Cinnaminson, P. O., Burlington Co., N. J.

GRAPE VINES

Grown by **Dr. C. W. Grant.**

Iona, Israella, Delaware, Allen's Hybrid, Diana, Adirondac, Creveling, Concord, Rogers' Hybrid, and all the older varieties of any value, furnished as low as good vines can be sold by any other Establishment. Descriptive Catalogue sent for 10 cents. Illustrated Catalogue, a thorough Treatise on the Vine, sent for 10 cents.

R. W. HOLTON, Agent,
32 John-st., New-York.

GRAPE VINES.—20,000 Grape Vines of unsurpassed quality and beauty of growth, consisting of all the new and approved kinds, for sale at reasonable prices. Send for price list. Address **G. E. MEISSNER,** Richmond, Staten Island, N. Y.

GRAPE VINES.

My stock this season comprises all the valuable hardy varieties, and has been produced with the greatest care, to secure plants that will give uniformly the best results. The great superiority that my vines have exhibited throughout the country, warrants the confident belief that I can, as heretofore, furnish the best and cheapest vines that can be offered.

The introduction and dissemination of the Delaware vine was an event of the utmost importance in American Grape Culture, in giving us a most hardy and enduring vine, superior to all others, in habit and character, as well as in the surpassing quality of its fruit, which fitted it to become "the educator of American taste," to use the apt expression of Mr. Peter B. Mead. Until shown by the practical test of the Delaware, the great excellence attainable by the native grape was not known. From the extensive dissemination of this variety, the American taste has already become, to a considerable extent, educated, and ready to appreciate and accept those only that are capable of yielding the highest degree of refreshing enjoyment.

Allen's Hybrid fulfills this requirement for the garden, for which it possesses a very good degree of hardiness, and certainty of production. It is exquisite in flavor, without any of the offensiveness that has so greatly detracted from the value of our native kinds. It is very early in ripening, as well as early and abundant in bearing. The excellences and peculiar characteristics of the Diana, I have clearly stated elsewhere, showing how it merits a very high rank for the garden and vineyard.

But it is my happiness to be able to offer, in two seedlings of my own, grapes which, without any defect, combine more excellence than any hardy grape in cultivation, and which will fully satisfy the most highly cultivated taste, formed by the use of the Delaware, Allen's Hybrid, and the best Foreign kinds in their highest condition. These are an event of not less importance than the accession of the Delaware, and are named as follows:

First, the **IONA**, large in bunch and berry, sufficiently compact, with that extreme degree of beauty in color and transparency that has belonged hitherto only to the Grizzly Frontignan. Like that most estimable variety, it is pure, rich, and spirited in flavor, and of uniform tenderness quite to the center. Its time of ripening is very early, being about the same as that of the Delaware. It is now on its seventh season of trial, and in different localities has exhibited a degree of constancy in production and perfection of ripening, with the absence of all unhealthiness, that belongs to the Delaware alone, with an exception that belongs probably to the Israella, only the latter has not been quite so extensively tested, having been one season less in bearing, but with the same constancy and excellence of habit.

The **ISRAELLA** is of large size; bunches large and compact, very dark in color, ripening as early as the Hartford Prolific, tender to the center—of very remarkable and peculiar excellence, for full account of which see price list.

Price list, (or two, if requested,) with full account of these new kinds, sent on receipt of stamp. When requested, a proposition will also be sent for the formation of clubs by which all of the members can obtain the vines at wholesale prices. For notice of Catalogues and Manual of the Vine, see advertisement in *Agriculturist*, August No.

C. W. GRANT,
Iona, near Peekskill, Westchester Co., N. Y.

DELAWARE VINES

AT

LOW PRICES.

PLANTERS who are forming Vineyards, and

NURSERYMEN who wish plants for stock, will find it their interest to examine the one-year-old plants of

PARSONS & CO.,

Of which they offer

200,000

At the following low prices:

No. 1. \$25 00 per 100.—\$200 00 per 1000.

No. 2. \$15 00 per 100.—\$125 00 per 1000.

\$1000 00 per 10,000.

No. 3. \$12 00 per 100.—\$100 00 per 1000.

\$750 00 per 10,000.

These plants are produced from cuttings of bearing vines. None of them are propagated either by layering or grafting, and they are so grown as to ensure an abundance of fibrous roots and thoroughly ripened wood.

The testimony of those who have purchased them for the last two years is of the most favorable character.

In consequence of the low price, their stock of Delawares has for two years been bought up early in the autumn by a few persons. The proprietors wish them more widely scattered, and hope therefore, that those who desire to purchase, will send their orders early.

In consequence of the great difficulty in growing the Delaware the first year, nurserymen will find it their interest to purchase largely to plant for stock.

The Proprietors can also furnish

100,000

other **HARDY GRAPES**, including **Concord, Diana, Creveling, Iona, Allen's Hybrid, Adirondac**, and other new sorts.

REMOBANT ROSES

On their own roots, and not propagated by budding or grafting in any root, at \$23 per 100.

Also all the best varieties of **DWARF and STANDARD FRUIT TREES**, and also a large collection of **DECIDUOUS and EVERGREEN TREES**, among which are some 200 varieties of **CONIFERS**. Catalogues furnished by mail.

Address

PARSONS & CO., Flushing, N. Y.

Adirondac Grape Vines.

1 year old, No. 1, very strong, \$3; No. 2, strong, \$2. All cut back to 3 to 5 eyes. No inferior vines will be sent out by me. Purchasers can rely on the quality of my vines being unsurpassed. Will be forwarded in sealed boxes by express, without charge for boxes. Small orders will be securely packed and sent by mail, pre-paid, when so ordered.

The two great grape Exhibitions held last autumn in New-York and Cleveland, awarded to the Adirondac, the prize for the "BEST NATIVE GRAPE OF ANY KIND, QUALITY TO RULE." The discovery and introduction of the Adirondac grape is an event of the highest importance to grape growers, and the greatest advance yet attained in native grapes. Its peculiarities are, extreme earliness, large clusters and berries, tender and thin skin, melting without any perceptible pulp, and of the most delicate and delicious flavor, reminding one of that splendid Hot-house grape the "Black Hamburg." Also first class vines of the following varieties, at the lowest rates, viz: Allen's Hybrid, Creveling, Concord, Cayahoga, Delaware, Diana, Hartford Prolific, Iona, Israella, Maxatawny, Northern Muscadine, Ontario, Rodgers' Hybrid, Nos. 1, 3, 15, 19, To Kalon, Sherman, Yeddo. Liberal discount to Nurserymen and Dealers. Price lists and trade circulars forwarded on application. **JOHN W. BAILEY,** August, 1884. Plattsburgh, Clinton Co., N. Y. Messrs. **FLEMING & DAVIDSON**, are my authorized agents for New York City.

Grape Vines.—50 Kinds.

Coloring from August 15th, to September 5th. At this date the **Dracut Amber** is in fine eating, bearing vines \$1 each; \$3 per dozen. Layers \$2.50 per doz.; \$10 per 100.—**Concord** 1 to 3 year old vines, \$10 to \$25 per 100; \$50 to \$175 per 1000. **Adirondac**, \$3.00 each; **Iona**, \$2.00 each.

All vines grown in open ground. Small and large fruits generally. **Russell's Prolific** and 30 other kinds. **Strawberry Plants**, **Evergreens** and **Shrubs**. Send for Catalogue, Address **J. W. MANNING, Reading, Mass.**

Grape Vines for Sale.

Delaware, Adirondac, Allen's Hybrid, Concord, Iona, Israella, &c., &c. Also Delaware, Hartford Prolific and Concord Wood. **B. H. MACE**, adjoining the premises of Chas. Downing, Newburgh, N. Y.

5000 ADIRONDAC, IONA, ISRAELLA, and CREVELING Grape Vines, for sale by **J. W. CONE, Norfolk, Conn.** SEND FOR PRICE LIST.

Japan Lilies.

HOVEY & CO.,

BOSTON, MASS.

Invite attention to their very extensive stock of several thousand bulbs, Japan Lilies, including their splendid seedlings, the finest yet produced. Catalogues and prices furnished by the quantity on application.

Dutch Bulbous Roots.

J. M. THORBURN & CO.,

15 John-st., New-York.

Have the pleasure to offer their usual assortment of **IMPORTED BULBS**; they are large, sound, and true to name, unlike those generally sold in cases. They are the first selection of **FIRST CLASS BULBS** obtained in Holland the present Summer—in addition to

Hyacinths,
Tulips,
Polyanthus Narcissus,
Crocus,
Crown Imperials,
Fritillarias,
Oxalis,
Ixias,
Lachenallias,
Lilies,
Arams and
Jonquilles.

We have a splendid collection of **French Hybrid Gladiolus** which will be offered after the first frost, also **White Rose and Red Japan Lilies.**

BEAUTIFUL COLLECTIONS

—OF—

BULBOUS ROOTS:

No. 1.—ASSORTMENTS OF

6 Fine Named Double and Single Hyacinths, for pots, glasses, or open border..... \$3.
1 Polyanthus Narcissus.....
3 Double Tulips.....
12 Fine Mixed Crocus.....
1 Bulbocodium Vernum.....

No. 2.—ASSORTMENTS OF

9 Fine Named Double and Single Hyacinths, for pots, glasses, or open border.....
6 Fine Double Tulips.....
15 Beautiful Named Early Tulips..... \$8.
25 Fine Mixed Crocus.....
3 Polyanthus Narcissus.....
6 Double Narcissus.....
3 Bulbocodium Vernum.....
3 Persian Iris.....
12 Double Snowdrops.....

No. 3.—ASSORTMENTS OF

18 Fine Named Double and Single Hyacinths, for pots, glasses, or open border.....
50 Fine Mixed Crocus.....
24 Beautiful Named Early Tulips.....
12 Fine Named Double Tulips..... \$15.
4 Polyanthus Narcissus.....
12 Double Narcissus.....
3 Persian Iris.....
3 English Iris.....
1 Crimson Crown Imperial.....
6 Bulbocodium Vernum.....
25 Double Snowdrops.....

Priced Catalogues containing directions for cultivation mailed on application to

J. M. THORBURN & CO., Seedsmen,
15 John-st., New-York.

Splendid Price Hollyhock Seed, 10 cts. per Paper.

Robert Buist, Jr.'s, Importation

OF

German Bulbous Roots.

HYACINTHS.

Double Red, without names, per doz., \$3 00, per 100, \$23 00
" Blue, " " " 3 00, " 23 00
" White, " " " 3 00, " 23 00
" Yellow, " " " 4 50, " 23 00
Single Red, " " " 3 00, " 23 00
" White, " " " 3 00, " 23 00
" Blue, " " " 3 00, " 23 00
" Yellow, " " " 3 00, " 23 00
Finest Named Double Varieties, " 9 00, " 70 00
Very Fine " " " 7 50, " 58 00
Fine " " " 6 00, " 45 00
Finest " Single " " 6 00, " 45 00

TULIPS.

Mixed Double Tulips, all colors, per doz., \$1 50, per 100 \$10 00
" Single " " " 1 50, " 10 00
Named Double " " " 3 00, " 20 00
" Single " " " 3 00, " 20 00
Duc Van Thol, { Red, White, Yellow, } ass'd 50, " 18 00
Mixed Parrot, { Vermilion & Scarlet }
" By-blooms, Bizarres & Roses " 1 50, " 10 00

CROCUS.

Mixed Blue, Purple, White, Striped, Yel. & variegat. each color, per doz., \$ 50, per 100 \$3 00
Named Varieties, 14 sorts, each, " 1 00, " 8 00
Snowdrops, Double, " 1 50, " 6 00
" Single, " 1 00, " 6 00
Jonquilles, Double, " 2 00, " 15 00
Anemones, mixed varieties, " 1 50, " 10 00
Ranunculus, " " 1 50, " 10 00
Polyanthus Narcissus, " 3 00, " 20 00
Narcissus Poeticus, " 1 50, " 10 10
Bulbocodium Vernum, " 2 00, " 2 00
Crown Imperials, folia striata, " 12 00, " 12 00

Orders by Mail promptly forwarded.

Address **ROBERT BUIST, JR.,**
Horticultural and Seed Warehouse,
Nos. 922 and 924 Market-st., above 9th,
Philadelphia, Pa.

HARDY FLOWERING BULBS, FOR FALL OF 1864.

MY ILLUSTRATED ANNUAL CATALOGUE
OF HARDY DUTCH and other Flowering Bulbs, and
Guide to the Flower Garden,
is now ready to send out. It consists of full and plain descriptions of the best

Hyacinths, Tulips, Crocuses, Snow Drops,
Crown Imperials, Anemones, Lilies, &c., &c.,
with ample directions for planting and culture. My Catalogue this season is beautifully illustrated, containing among other illustrations two full page engravings, and one beautiful colored plate of the

JAPAN LILY.

It is sent free of postage to all who apply, inclosing ten cents. Catalogues always sent to my customers of the previous year, free, as soon as issued, without being ordered. My importations from Holland the present year have never been equalled for extent, variety and excellence.

Address **JAMES VICK,**
Rochester, N. Y.

FROST & CO., Genesee Valley Nurseries, ROCHESTER, N. Y.

Parties who desire to purchase **first quality Standard or Dwarf Fruit Trees, Small Fruits, Ornamental Trees, Shrubs, Plants, &c., &c.,** in large or small quantities, are solicited to inform themselves of our stock and Prices.

Our Nursery contains nearly **FOUR HUNDRED ACRES**, which enables us to fill orders even of the most extensive character, while particular attention is given to orders amounting to small sums.

Our stock will be supplied at the most **favorable rates.** The following Catalogues with prices are furnished on application upon receipt of five cents for each.

No. 1 and 2. **Descriptive priced retail Catalogue** of Fruits, Ornamental Trees, Plants, &c.

No. 4. **Wholesale priced Catalogue** of Fruits, Ornamental Trees, &c., for nurserymen, dealers and others, who wish to buy in large quantities for the Autumn of 1864.

Address **FROST & CO.,** Rochester, N. Y.

Standard Pear Trees!! OF

Very Superior Quality.

We have a large stock of **Standard Pears**, **SPLENDID TREES**, strong, healthy, and thrifty—leading sorts in large supply.

ALSO

An extensive general assortment of **Fruit and Ornamental Trees, Shrubs, Roses, Grape Vines, Evergreens, &c., &c.** A large lot of **Norway Spruce**, size 2 to 4 feet—strong, well established plants. Nurserymen, Dealers, and all intending to purchase, are invited to call and examine our stock. Catalogues sent on receipt of a three cent stamp.

T. C. MAXWELL & BROS.,
Geneva, Ontario Co., N. Y.

REID'S NURSERIES, Elizabeth, New Jersey.

DAVID D. BUCHANAN, Supt.

Offers for sale this fall, a fine stock of 1st quality of Fruit Trees of every description, especially **Standard and Dwarf Pears**, which are extra strong.

Ornamental and Evergreen Trees of all kinds. Shrubs, Grape Vines, &c., &c.

Our trees are very strong and vigorous, the wood has ripened well and they are in fine condition for fall planting or transportation.

Parties dealing with us can rely on having none but those of the first quality.

The Public are respectfully invited to call and examine our stock.

CATALOGUES SENT ON APPLICATION.

Stephen Hoyt & Sons,

Offer a large stock of thrifty and well grown

FRUIT TREES,

consisting of **Standard and Dwarf Apples, Pears, Cherries, Plums and Peaches**, as well as the smaller

FRUITS AND GRAPE VINES.

They also invite attention to their large and fine stock of **Evergreens and Deciduous Ornamental Trees.**

Also a fine and large stock of two year old **Apple and Sugar Maple Seedlings.** Catalogues sent to applicants.

STEPHEN HOYT & SONS,
New Canaan, Conn.

August 13th, 1864.

BLOOMINGTON NURSERY.—220 Acres Fruit, Ornamental and Nursery Stock, 75,000 Pear, 40,000 Peach, 100,000 Grape, &c. Send red stamp for Fall List.

F. K. PHOENIX, Bloomington, Ill.

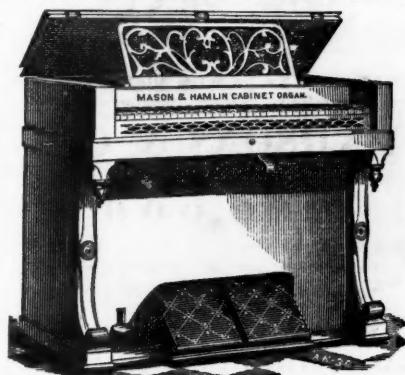
Sidney Nursery.

The undersigned offer for sale, at low rates, **150,000 Standard Apple and Pear Trees**, also a general assortment of Nursery Stock. The attention of Tree Dealers and Planters is solicited, and a correspondence invited.

L. C. COE & CO.,
Sidney, Shelby Co., Ohio.

August, 1864.

Mason & Hamlin's CABINET ORGANS



CAUTION TO PURCHASERS.

The wide demand for our **CABINET ORGANS** has induced dealers in some cases to advertise quite different instruments as **CABINET ORGANS**, and in others to represent to purchasers that **Harmoniums** and other reed Organs are the same thing. **THIS IS NOT TRUE.** The excellences of the

CABINET ORGANS

which have given them their high reputation, arise not merely from the superiority of their workmanship, but also in large measure from essential differences in construction, which being patented by us, can not be imitated by other makers. From these arise their better quality and volume of tone, and capacity for expression. Every **CABINET ORGAN** has upon its name-board in full, the words,

"**Mason & Hamlin Cabinet Organ.**"

When a dealer represents any other instrument as a **CABINET ORGAN**, it is usually a mere attempt to sell an inferior instrument on which he can make a larger profit.

THE CABINET ORGAN

is designed for Parlors, Churches, and Schools, and is recognized by Musicians as unquestionably superior to all other small Organs, and every thing of the **Melodeon or Harmonium** kind. Full description of instruments with testimonials, sent free to any address.

PRICES FROM \$110 TO \$600.

Warerooms:—No. 274 Washington-st.,
Boston, Mass. **MASON & HAMLIN.**

No. 7 Mercer-st., New-York.
MASON BROTHERS.

NEW MUSIC BOOK FOR SCHOOLS. THE SONG-GARDEN.

SECOND BOOK,

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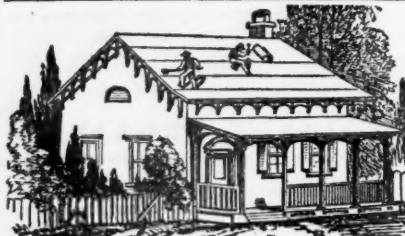
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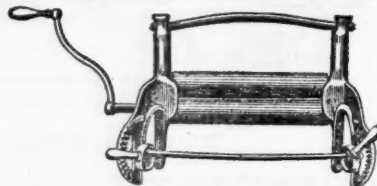
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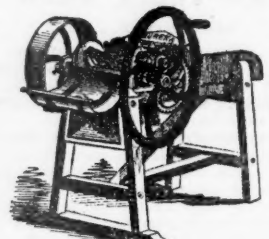
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WILLIAMSTOWN, Mass., April 9th, 1864.

Messrs. Mallory and Sanford:
GENTS.—I have been using one of your No. 1 Patent Flax Brakes since January last, driving it with a horse power. I am perfectly satisfied with it, and think it will do all and more than recommended. My neighbors think yours far superior to the Old Brake, and, in fact, the best brake ever seen.
DEWITT C. SMITH.

Messrs. Mallory and Sanford: April 11th, 1864.
GENTLEMEN.—I have been requested to give a statement of an acre and one-half of flax raised by me last season: it being a very rainy time when rotted, it got over rotted, so much so, that it was very tender. I took it up in the month of November last. I was told by a neighboring flax-mill man, that he had a Brake that was an improvement on the old-fashioned Brake, and could get more flax from it than Wilcox could get from your Brake. So I concluded to take part to each mill; so I took 120 bundles to R.'s mill, and got FORTY-eight pounds (Old Brake). I took the remainder 220 bundles to Wilcox's mill, and got ONE-HUNDRED and SIXTY-two pounds—the straw was all alike, and the dressing good in both cases. I get from Old Brake 114 pounds, and 22 by your Brake, making by your Brake 107 pounds to the ton in favor of your Patent Brake. This is quite an item with me, as I am a ropemaker, and the flax is worth 25 cents per pound to me.
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Mailed Strawberry Plants, Wilted but not Dead.

Very much to our gratification, many of the first on our list have written that their plants reached them by mail in a perfectly fresh condition, and when set out started at once into vigorous growth, sending out runners. This is better than we can usually expect. The best gardeners cut off all the old leaves and stems when they transplant strawberries, leaving the whole vigor of the roots to go to the growth of new leaves from the crown; and they advise this practice. But, as this is not generally understood, and also to let the recipients see what vigorous leaves the plants have borne, we generally send along most of the foliage, expecting that it will wilt and usually die in the mail parcels. This does not at all affect the soundness of the roots; if these are not thoroughly dried out, the plant will grow quite as well as if the leaves were still green, when set in the moist soil if not too cold and wet. We wrap the roots first in fine damp moss and oil-cloth, then in a thick sheet of specially prepared heavy paper almost waterproof, and then in an outside sheet of sized paper; and the whole is firmly tied three or more times. It is very seldom that the roots of plants thus packed will so far dry out in ten days, or more even, that they will not grow well. We have received plants not so well packed which had endured a month's carriage. The mailing boxes were designed to wholly shield the plants from pressure, as well as from drying. Why they were not used is explained in another column. (See page 284.)

Continuation of the \$5.00 PREMIUM.

With printing paper at triple the old price, and other expenses to match, we are compelled to adhere strictly to our only terms, viz., \$1 a year. Nor until Lieut. Gen. Grant, and his coadjutors reduce the price of gold and cotton (and consequently of printing paper), can we afford premiums. But the recent excellent weather has favored us by pushing on the great Strawberry Plants until we have some more than enough to supply every subscriber with a specimen. Experienced fruit growers esteem them so highly as to readily pay \$5 a dozen for them. As these now involve little additional outlay, we can continue the offer of last month as follows: Any person sending in during this month (Oct.) a Club of 20 subscribers, at \$1 each, will be presented with **One Dozen** of the "Agriculturist Strawberry" plants; and each subscriber will of course, be also entitled to his own plant, if he enclose the usual 5 cents extra for packing, and postage. When \$1.15 is sent (instead of \$1 each), the paper will be supplied *fifteen months*, that is, the last three months of this year, and all of 1865, (Vol. 24).—Extra time will be allowed for responses to the above offer, coming from the Pacific Coast and other very distant points.—The plants will now be forwarded at once, or early in spring if requested.

Special Notes to all Expecting or Wishing Strawberry Plants.

- 1st. See explanation of delay, and Box failure, p. 284.
- 2nd. The Plants are mailed at Flushing P. O., the nearest office to our Homestead, where they are put up. This is not our business address, however. Direct all letters to the Office, 41 Park Row, New-York City.
- 3d. Every parcel is sent *post-paid*; the law requires this, and no Postmaster is allowed to send any other than post-paid matter. We hear that in some cases the parcels have arrived without any stamps on; owing to the dampening through of the envelopes, the stamps slipped off in the mail bags. The marks left by them and the P. O. imprint ought to show that postage had been paid. On hearing of this difficulty, after sending off the first parcels, the envelopes were stamped "PAID," by the P. M., in addition to the usual "killing" of the stamps.
- 4th. N. B.—We cheerfully give every subscriber for Vol. 23 (1864), at least one plant, on furnishing his 5 cents extra to pay simply the expense of putting up and mailing. (It has cost us more than that, and there is no profit on the paper this year to pay even this small sum.) A good many attempts have been made to impose upon us by persons not subscribers at all, who have in a very ingenious, plausible manner, enclosed 5 cents and said, "Please send my plant to—etc." Some others have sent in the 5 cents and applications from 2 to 6 times, expecting us to overlook previous applications in our hurry, and send them as many different parcels. This has made it necessary to look over the previous list of names in every case where an application comes separate from the subscription—a very serious trouble. Therefore, as a rule for the future, we must require every one wishing the plants to send the application and 5 cents, along with the subscription and always in the same letter.
- 5th. All new subscribers, either for this year or next, coming in this autumn, will be presented with the plants, if they send the 5 cents extra at the time of subscribing.
- 6th. Applications arriving too late for forwarding the plants this fall, will be supplied at the earliest moment the weather will admit in the spring. Any one can choose the spring season, if he does so when subscribing.
- 7th. Any well attested case of loss of plants by mail we will be happy to duplicate, on receiving the extra cost (5 cents) of sending again. So much care has been constantly exercised, that we do not believe a single proper application has been omitted, or overlooked by us.

90,000 Bushels of Strawberries!

We are sending out at least 90,000 of the new Strawberry Plants this year. Each of these plants will with fair care make from 50 to 200 or more new plants next season, or enough to set a bed that will yield over a bushel of good berries the following June. This should be the lowest average. So, if then living, we shall have the pleasure of thinking a year from June next, that

at least 90,000 bushels of good, delicious strawberries are being gathered by our "American Agriculturist Family"—all derived from the plot we have been watching over with so much care and anxiety during fifteen months past.

Strawberry Plants for Sale.—Our obligations to our subscribers are fulfilled, and we have some plants of the *Agriculturist* Strawberry to offer for sale. We have been induced to do this from the desire frequently expressed by nurserymen and others to have it upon their lists, and from the repeated solicitation of amateurs for more than the free specimens given them as subscribers. The distribution of 90,000 plants this fall was all we expected to be able to accomplish, particularly after the unprecedented drouth, and we attribute it chiefly to the great vigor and hardiness of the variety, that we have now any surplus stock on hand, even after the most careful and unremitting attention—Involving a large outlay for a small part of which we hope to be reimbursed.—Cash orders will be promptly filled at the following rates, as previously announced, viz: 1 plant 75 cents—2 plants \$1.20—6 plants \$3—12 plants \$5—100 plants \$25. Only good, strong plants will be sent out and they will be well packed without charge, and sent by mail, postpaid, when desired.

Awful Price of Printing Paper!

After correspondence with the leading Paper Mills of the country, we made the best contract possible for a supply the rest of this year; but the bills as they come in are enough to give one a "cold sweat." The subscription money received little more than pays for the white paper; advertisements must pay other expenses. But we still cling to old rates, under the strong impression that Messrs. Grant, Sherman, Sheridan & Co., will very soon knock down prices. So confident are we of this, that we dare to solicit, and promise to receive during this month, new subscriptions at \$1 a year, or \$1.15 for fifteen months. If the price of paper does not go down, we shall be compelled to charge more; and of course those subscribing later, will have to pay higher rates.

NOTA BENE. NOTE WELL.

All terms, subscription rates, premiums, prices of books, etc., are strictly limited to the month in which they are announced. The constant changes in currency oblige us to adopt this rule. The same terms may be continued, but can not be promised. Whatever is promised for any month will be fulfilled to the letter; if we get the bad end of a bargain, we shall live up to it. For example, those paying a year's subscription now will get the paper a year at the rate now offered, however high we may soon be compelled to fix our rates.

Back Volumes & Numbers Supplied.

We have complete sets of Vols. 16, 17, 18, 19, 20, 21, 22, both unbound, and bound in neat covers with gilt lettered backs. Prices at the office: bound \$1.75, unbound \$1.00 each. Back Volumes are sent prepaid by mail, (they can not go unpaid), if bound, \$2.25 each; if unbound, \$1.24 each. Single numbers of any of the above Volumes, 12 cents each. **Binding.**—Sets sent to the office will be bound up neatly (in our regular style of binding) for 75 cents a volume. **PREPARED COVERS.**—Covers for binding, neatly made, with title, etc., gilt upon the back, ready for the insertion of the sheets by any bookbinder, can be furnished for Vols. 16, to 22 inclusive, at 45 cents per cover. Covers can not go by mail.

American Agriculturist.

For the Farm, Garden, and Household.

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